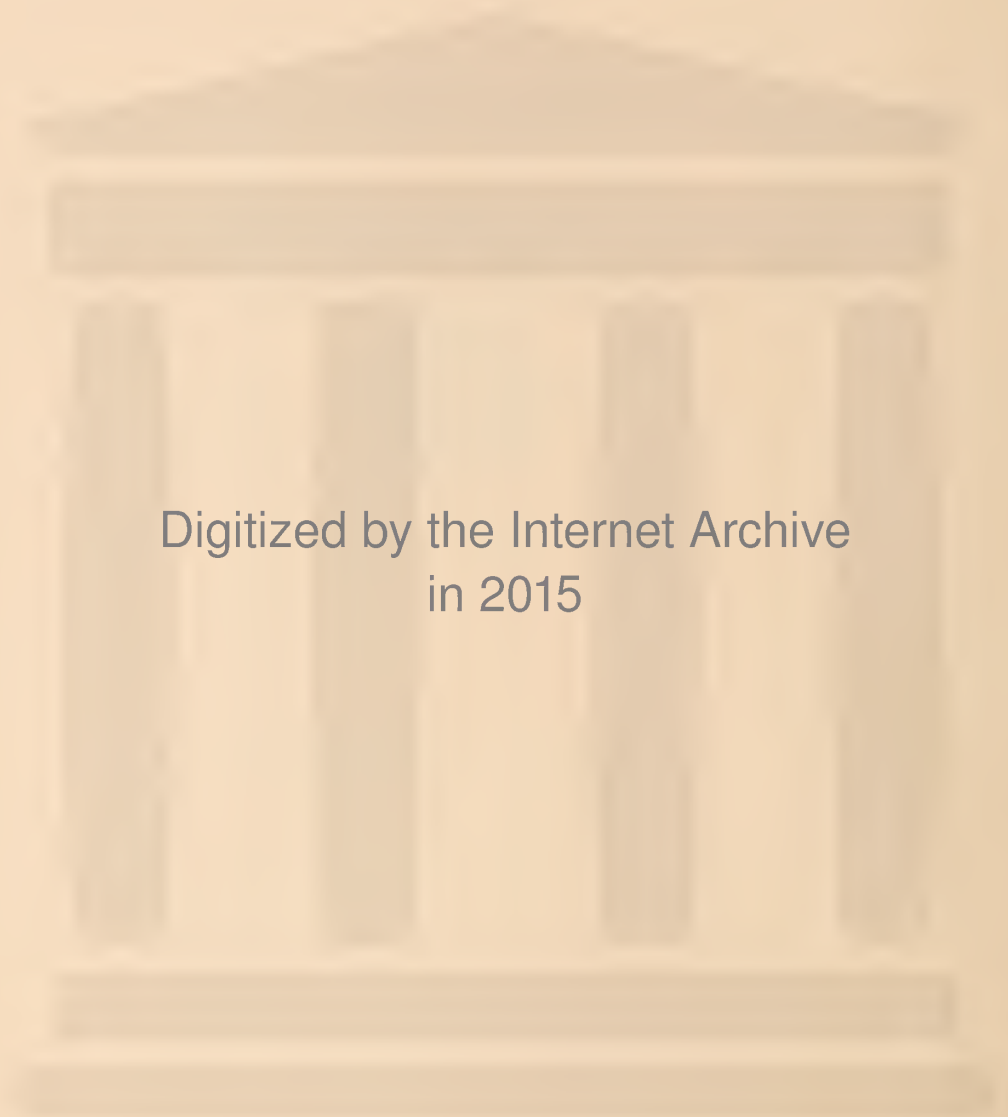
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***The Military Surgeon, Vol. 89, No. 1, p. 5, July, 1941*

****ibid. p. 5*

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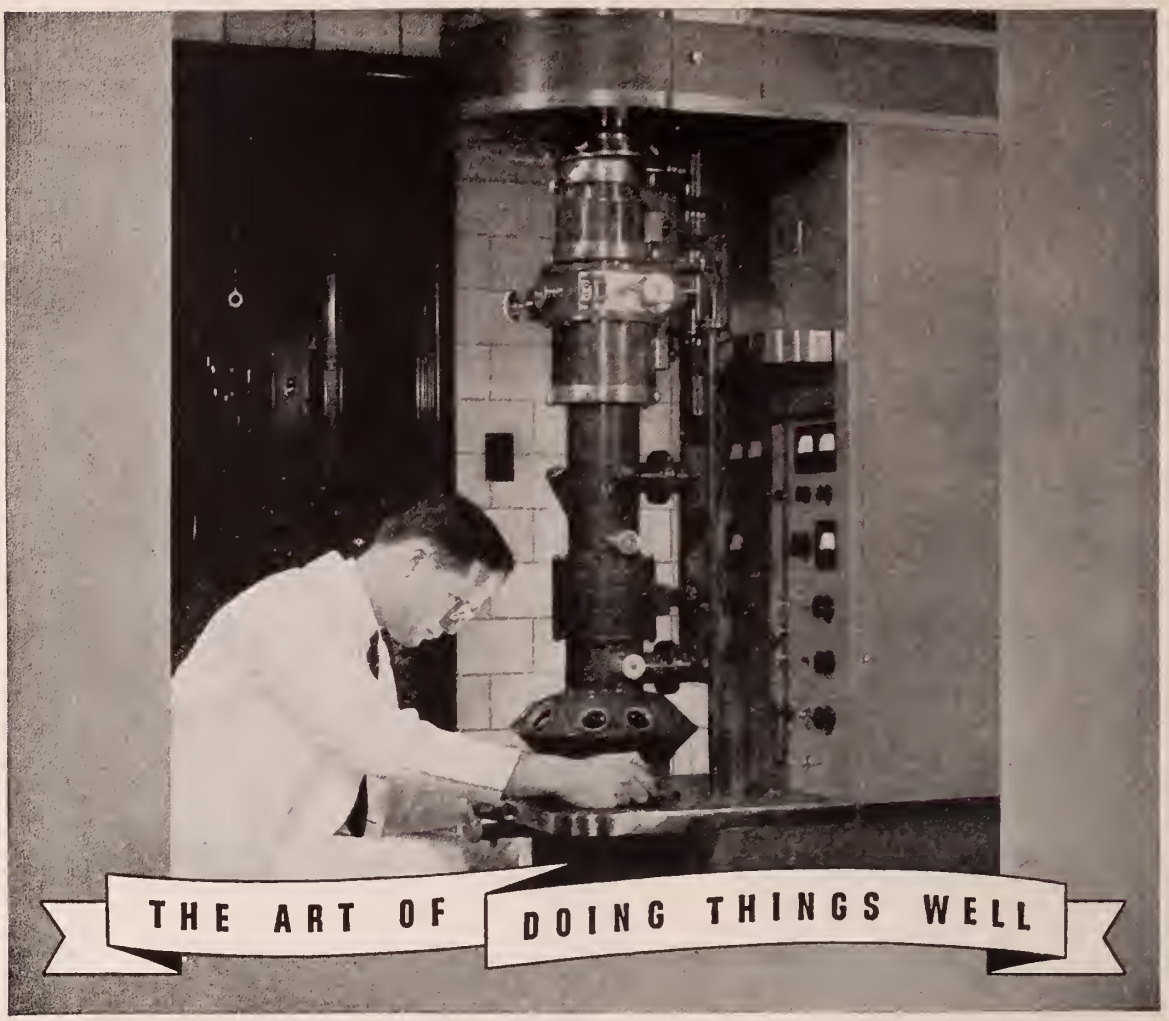
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INJURIES OF THE CHEST

DANIEL C. ELKIN, M. D.
ATLANTA

The danger from wounds of the chest is in a large measure due to the narrow margin of safety under which the thoracic viscera work. A rapid change of pressure relationships within the thorax affects the aeration of the blood, the filling and emptying of the heart, and the circulation not only of the thorax, but also of the whole body. A knowledge of certain fundamentals of the mechanics of respiration is, therefore, a necessary prerequisite for the surgery of this field. Injuries affecting these relationships may be rapidly fatal and are, in consequence, worthy of immediate and heroic action.

With the respiratory passages open and the lungs at rest, the pressure within the lungs (the intrapulmonic pressure) is the same as that of the atmosphere, but with inspiration and expiration certain changes take place. These changes vary greatly with the intensity of the respiratory movements and with the size of the opening to the exterior. Forced expiration with the glottis closed raises the intrapulmonic pressure. A crushing pressure applied to the chest, such as may happen in accidents, can raise it to such an extent that one or both lungs may be ruptured, even though the thorax is not penetrated.

The pressure within the thoracic cavity outside the lungs (the intrapleural pressure) is normally negative, because of the elastic recoil force of the lungs. It varies, too, with the depth of respiratory excursions. These changes affect not only the lungs but the whole cardiovascular system, since the intrapleural pressure, including that of the venae cavae as they enter the heart, is normally less than that of the atmosphere. If for any reason there is a change from a negative to a positive pressure, the filling and emptying of the heart are immediately affected.

Conditions are quite different with the thorax opened, and upon a recognition of these conditions are based the fundamental principles of most operative procedures within the thorax. If the opening in the chest is smaller than the larynx, the lung collapses, but on inspiration partial expansion occurs, and respiration in a patient with normal vital capacity is only slightly embarrassed. If the opening is larger than the laryngeal opening, air will enter more freely than through the trachea. The mediastinum will be forced toward the unopened side in inspiration and back toward the opened side in expiration. This condition, known as mediastinal flutter, probably subjects the heart and great vessels to varying degrees of positive and negative pressure. In addition, air passes from one lung to the other in useless exchange. All these changes may lead to rapid asphyxia. The first principle, therefore, in the treatment of a sucking wound is immediate closure of the opening, preferably by suture of the skin, or by temporary plugging with the finger or the hand, or by the application of moist gauze.

It must be borne in mind that with wounds of the chest as with those of the head the injury to the casing is of less importance than the damage of the underlying structures. A simple fracture of the skull may be of little or no importance, nor is a broken rib of great significance without injury to the heart or lungs. It may occasionally happen that there may be destructive lesions of the lungs with little visible trace of injury to the bony framework. It is difficult to draw a typical picture of an injury of the chest since the symptoms vary widely with the degree of shock and of bleeding. One syndrome common to all such injuries is that of shock and dyspnea. In cases of penetrating wounds of the chest, shock is usually instantaneous, but it differs somewhat from the shock which follows in cases of wounds in other parts of the body for in these cases mental apathy is apt to predominate. In cases of wounds of the chest, the mental condition of the patient is usually active and anxious.

The chief dangers in wounds of the chest are:

1. Mechanical dangers.
2. Hemorrhage.
3. Infection.

The main considerations in the treatment of all injuries of the chest are (1) the treatment of shock, (2) the arrest of hemorrhage, (3) the replacement of lost blood and fluids, (4) the restoration of the physiology and dynamics of the cardiorespiratory system, and (5) the prevention and treatment of infection and complications.

Whitehead Professor of Surgery, Emory University, Atlanta, Ga.

Delivered by invitation before the Sixty-Ninth Annual Meeting of the Florida Medical Association, Hollywood, April 14, 1942.

Thoracic injuries in civil life differ from those incident to war, and are less severe. In the former, a knife, an ice pick, or a pistol bullet is the usual weapon, and large sucking wounds, such as are made by schrapnel, are less frequently encountered. The lodgment of clothes, ribs and shell fragments, giving rise to serious infection, is therefore more rarely a complicating factor.

The present war, in which civilians have been subjected to heavy bombing, has emphasized another type of injury rarely observed in civilian practice. This is the so-called blast injury. Injuries of this kind are often serious and frequently fatal, and the cause may be defined as the compression wave which is set up by the detonation of high explosives. The outstanding lesion is hemorrhage from both lungs; the blood apparently originates from torn alveolar capillaries, the surfaces of the pleura and the lining of the bronchial tree. Such injuries usually occur without external evidences and, therefore, may be overlooked. Moreover, there is a discrepancy between the symptoms and the physical signs. The principal signs are dyspnea, cyanosis and occasionally the expectoration of frothy, bloody fluid. Those patients who survive the immediate effects of a blast injury usually pass through a period during which no injury of the lungs is suspected. The first indication that arouses suspicion of such an injury may be merely a cough, a rise of temperature, pain in the chest, increasing dyspnea or cyanosis. The extent of these symptoms is altogether dependent upon the area of lung involved. Within a week symptoms usually subside, and the condition entirely clears up. Roentgenograms are of value in that they show mottled shadows in the areas of hemorrhage. The patient should be kept warm and should be kept as quiet as possible with opiates; oxygen should be administered immediately and continued so long as cyanosis and dyspnea are present. Plasma or blood transfusion should be withheld unless there is a great degree of shock since it appears to increase the hemorrhage from the lungs by raising the blood pressure.

Pleuropulmonary lesions may be divided into those having (1) open wounds of the thoracic wall and (2) those having closed wounds. Open wounds are by far the more dangerous, the degree of danger depending upon the size of the wound, the amount of foreign material carried into the chest and the injury to the viscera. Such wounds should be carefully cleansed and debrided as soon as possible.

Chemotherapy should be instituted at the earliest possible moment in every case of this type, and large, dirty, lacerated wounds of the wall of the chest should be packed with sulfanilamide crystals. It must be borne in mind, however, that chemotherapy does not do away with the necessity of careful cleansing of the wound and debridement. When there is evidence of pulmonary hemorrhage from extensive laceration, it may be necessary to open the chest widely to control hemorrhage by suture of the lung. When the hemorrhage originates from the great vessels at the hilus, a lobectomy or pneumonectomy may be necessary for the control of bleeding. When the chest has been so opened and the lung sutured or removed, the pleural cavity should be carefully cleansed and tightly closed around an indwelling tube which is connected to under water drainage. The presence of infection (empyema) must be carefully watched for, and when it is definitely established, it should be treated as empyema arising from other sources. The presence of large foreign bodies such as schrapnel, rib, or clothing, predisposes to infection, and when possible they should be removed at the time of the original operation. For this purpose the roentgenogram is of inestimable value.

Pleuropulmonary lesions with a closed wound are more common and far less dangerous. They are usually caused by a knife or bullet, and the external wound has closed spontaneously, or has been converted into a closed lesion by suture. The main problem in the treatment of thoracic injuries in civil life is, therefore, concerned largely with closed wounds and the conditions arising from injury to the thoracic viscera. Treatment is always dependent on the symptoms exhibited by the individual patient rather than by a set rule. In the main, the treatment is conservative and nonoperative, although operation is carried out for wounds of the heart, for large lacerated wounds of the lung, for hemorrhage from an intercostal or internal mammary vessel and for compression pneumothorax.

Complications following fracture or any injury of the chest must be watched for and treated as they arise. The most common are (a) pneumothorax, (b) atelectasis, (c) emphysema (d) hemothorax, (e) contusion and hemorrhage into the lung, (f) traumatic asphyxia, (g) paralytic

ileus and (h) empyema.

Traumatic asphyxia is due to violent but temporary compression of the chest. Two types are recognizable. The more common and more serious is characterized by short, uneven respirations. There is a general pallor of the face and neck with areas of purplish discoloration. The pulse is weak but fast, and the skin is cold and clammy. Often the patient is unconscious or stuporous. The treatment is that of shock, and the administration of oxygen. If the patient recovers from shock, the prognosis is good. The more rare and less serious type is characterized by ecchymosis of the face, neck and upper part of the chest. It is caused by compression of the chest, with a sudden rise in the intrapleural pressure, which collapses the veins of the mediastinum and forcibly ejects the blood into the valveless veins of the neck and head. There are subconjunctival hemorrhages, exophthalmos and hemorrhages into the skin. If this condition remains uncomplicated, recovery takes place in from seven to twenty days. Treatment is supportive with inhalation of oxygen.

Injuries of the lung and pleura may produce two types of emphysema, (1) subcutaneous and (2) mediastinal. When the lung is torn and a tension pneumothorax develops, air may be forced through an opening in the parietal pleura into the subcutaneous tissues of the thoracic wall, or even over the greater part of the body.

The majority of cases of subcutaneous (interstitial) emphysema require no treatment other than that of the injury of the chest. If the wound in the lung is valvular and the emphysema spreads rapidly, it may be necessary to explore the wound and close the opening in the pleura. Sometimes suturing the intercostal muscles together tightly will suffice, or inserting a needle or trocar into the chest and withdrawing the air. Rarely is it necessary to resort to multiple incisions to relieve the tension.

Emphysema of the mediastinum is rare. If the lung is injured internally, air may be forced along the peribronchial and perivascular tissues to the mediastinum. In cases in which the trachea or large bronchi are injured, there will probably be extensive mediastinal emphysema, which may greatly embarrass respiration and produce death unless the pressure is relieved. The symptoms are those of crepitation over the suprasternal notch and cardiopulmonary distress; also, roentgen examination gives evidence of air in the mediastinum.

The treatment of mediastinal emphysema depends on the amount of tension present. Some cases can be left alone entirely. Some can be successfully treated by aspirating the air from the pleural cavity and relieving the tension in the mediastinum. Others have to be treated by making an incision over the suprasternal notch and allowing the air to escape through the opening. If the latter becomes necessary to prevent collapse of the intramediastinal vessels or trachea, then great care must be taken not to produce infection and mediastinitis. Where a large bronchus is torn, suture of that structure may be necessary.

Tension pneumothorax is a type of valvular pneumothorax; that is, the valvelike tear in the lung allows the air to enter the pleural cavity, but prevents its escape. The closed type is seen in cases in which the lung is ruptured by external compression when the glottis is closed. The symptoms are shock, cyanosis, dyspnea and shifting of the mediastinum. If the injury of the lung involves the mediastinal pleura, mediastinal emphysema may result, and may progress to such an extent that crepitation can be felt in the suprasternal notch.

Tension pneumothorax can be rapidly fatal and should be treated immediately. The best and simplest method of treatment is to allow the air to escape through a large needle inserted into the pleural cavity and connected with a rubber tube that is trapped under water. Uncomplicated pneumothorax without tension requires no treatment other than keeping the patient semiupright in bed for a few days, because air is rapidly absorbed by the pleura.

Blood may collect in one or both pleural cavities following any thoracic injury. Most penetrating wounds of the chest are followed by the accumulation of blood in the pleural cavity, varying from an imperceptible amount to several liters. There are several sources from which the blood may come. Often it comes from the injured lung. It may also come from severed intercostal vessels, internal mammary vessels, the azygos veins, the heart, or even injured abdominal viscera if the diaphragm has been penetrated. The extent of the collapse of the lung and, therefore, the degree of dyspnea depend upon the amount of blood and air in the pleural cavities. Many cases of hemothorax are accompanied by varying degrees of pneumothorax.

The treatment of hemothorax depends upon the severity of the hemorrhage and its source. If the bleeding is from an intercostal or internal mammary vessel, the vessel should be ligated immediately. If the hemorrhage is from the lung, bleeding will usually continue until the intrapleural pressure rises high enough to serve as a tamponade, which stops the bleeding.

If the extent of the hemorrhage is not great enough to produce distressing respiratory symptoms and is not steadily increasing in amount, then it should be left alone. In such cases the patient should be placed in a semiupright position to facilitate respiration and should be given sufficient morphine for rest. Morphine not only makes the patient more comfortable, but is valuable in controlling further hemorrhage by decreasing physical and respiratory movements, thus allowing quicker clotting at the point of hemorrhage.

Whenever possible, the blood should be left in the chest. If the blood is withdrawn, the lung will reexpand, and hemorrhage may start anew. Instead of decreasing the chances of empyema, aspiration will increase them because it is an added avenue of entrance for bacteria. In over 95 per cent of the cases the blood is readily absorbed. The only indications for aspiration are severe dyspnea and pain.

If hemorrhage is sufficient to cause distressing respiratory difficulty, then thoracentesis must be performed and enough blood withdrawn to bring about comfort. It is best to replace the blood withdrawn with the same amount of air to maintain sufficient intrapleural pressure to prevent further hemorrhage from the injured lung. If hemorrhage persists in filling the chest, it may be necessary to open the thorax and control the hemorrhage with ligatures or packs. Several transfusions may be necessary. It must be borne in mind that the danger of infection in war wounds is far greater than in those occurring in civil life, and for this reason many advocate aspiration of any blood from the pleural cavity. Moreover, in war wounds, produced by larger missiles and with greater tissue injury, operative intervention is more frequently indicated.

Chylothorax results from damage to the thoracic duct as it passes through the mediastinum. It occurs infrequently and may easily be mistaken at first for empyema, as the fluid is gray and sanguineous. This condition appears from one to three days following an injury of the chest and soon produces respiratory distress which rapidly increases, making aspiration necessary. If the aspirated fluid is allowed to stand, it will separate into an upper milky and a lower bloody layer. Analysis of the fluid reveals that fat is present.

Prognosis is grave as only about 50 per cent of the patients survive. Death may be due to suffocation and cardiac failure as a result of the massive effusion. If delayed, death is the result of inanition and emaciation.

Treatment is chiefly that of repeated aspirations. The frequency of aspiration depends on the amount of the effusion and the occurrence of respiratory embarrassment.

Crushing injuries of the chest frequently occur as a result of automobile accidents. Many are immediately fatal and are due to rupture of the heart, lungs or great vessels as a result of compression, or penetration of the viscera by the sternum or broken ribs. Little attention has been paid to nonpenetrating cardiac lesions which are not fatal. Certainly there is no reason to believe that the heart, situated as it is between the sternum and the spine, is not subject to contusion of considerable severity and from which recovery takes place in the majority of instances. The most common cause of such an injury is that in which the driver is suddenly thrown forward against the steering wheel; the sudden compression may injure the heart without fracturing the sternum or ribs. In any patient who is struck in the chest such an injury should be suspected, particularly if symptoms of precordial pain, dyspnea and tachycardia are present. Persistence of these symptoms, together with irregularity of the heart, cyanosis and a peculiar "tick-tick" quality of cardiac sounds, makes the diagnosis almost certain. The treatment is entirely symptomatic. The chief reliance is to be placed on morphine for rest, and on oxygen for dyspnea and cyanosis. The patient should be confined to bed until all symptoms have subsided.

In crushing injuries of the chest several ribs may be fractured at two or more points resulting in the so-called "stove-in" chest. This type of injury occurs usually as a result of automobile accidents, or is caused by falling timbers or walls as, for example, following bombing. Because of the lack of support by the ribs the wall of the chest becomes depressed on inspiration and bulges during expiration. This paradoxical respiration

is similar to that observed in open pneumothorax and may be equally as dangerous. The treatment consists of immobilization by strapping. It must be borne in mind that an injury of this type may carry with it injury of the underlying pleura or lungs.

Perforation of the diaphragm, with or without abdominal injury, may result from various types of thoracic injuries and it occurs probably more commonly than is realized. Unless there is an accompanying abdominal injury, in many cases the condition may go for weeks or even months before being recognized. Probably many cases are never recognized if the perforation is small or incomplete.

There are no distinctive early symptoms unless there has been abdominal damage. Later the symptoms of the diaphragmatic hernia develop. Treatment is symptomatic. The injury of the chest must be treated according to what damage has been done. If signs and symptoms of perforation of an abdominal viscus are present, an exploratory celiotomy must be performed and the damage repaired. Crushing injuries, bullet wounds and wounds from long knives are the most common causes of thoracoabdominal injuries in civil life.

It is frequently difficult to decide whether or not the thoracic injury alone is responsible for all symptoms since injury to the thorax may by reflex action produce abdominal signs. Rigidity is not necessarily an indication of abdominal injury, but when it occurs, a careful watch should be made for increasing dulness in the flanks, difficult respiration so frequently noted in diaphragmatic injury and hematuria. With injury of the diaphragm and herniation of the stomach into the chest, dyspnea and tachycardia occur, and the patient complains of pain in the neck and shoulder.

Penetrating wounds of the heart are usually produced by stab or bullet. Approximately 2 per cent of penetrating wounds of the chest injure the heart.

Symptoms of exhaustion, collapse, cessation of bleeding from the external wound and frequently unconsciousness are due to tamponade and loss of blood. When the heart is wounded, it usually bleeds freely into the pleural cavity or to the outside. At the same time blood collects in the pericardial sac. When from 100 to 200 cc. has collected, the pericardium becomes distended, the intrapericardial pressure rises, and the venae cavae can no longer empty normal quantities of blood into the heart. The heart being unable to fill to capacity, can no longer empty, and cerebral anemia results.

To aid in the diagnosis, the venous pressure should be taken, and the heart should be viewed through the fluoroscope. Under the fluoroscope, the normally active cardiac shadow is seen to be motionless, or its amplitude greatly reduced. The normal venous pressure is 75 to 125 mm. of water, but in cases of tamponade the venous pressure may rise as high as 400 mm. of water and still be compatible with life, if the pressure is not maintained for too long a period. In summary, a lowered or falling arterial pressure, a high or rising venous pressure, and the absence of cardiac pulsations by fluoroscopic examination make the diagnosis of tamponade practically certain.

Operation should be carried out as soon as the diagnosis is established. To hasten and facilitate the operative procedure, all necessary instruments should be kept ready in a separate container. Since infection of the pericardium and pleura is a frequent complication, meticulous care in preparation and technic should not be sacrificed for speed. While preparations are being made, sufficient morphine should be administered to insure rest and quiet. The head should be lowered, and the body should be kept warm. Theoretically, intravenous infusions are of little value so long as tamponade is present, but when excessive hemorrhage has occurred, they are indicated. The administration of plasma may be life-saving, and autotransfusion of the blood removed during the operation should be administered when possible. Blood transfusion should be undertaken as soon as possible after the release of tamponade. For this purpose the blood or plasma bank is an invaluable aid.

Anesthesia—Inhalation anesthesia is preferable to local anesthesia. The pleura may have been opened by the wound, or may be accidently opened during the operation, and nitrous oxide and oxygen under positive pressure are necessary for the inflation of the lung. The difficulties of cardiac suture require that the patient be quiet, but patients requiring this measure are usually wildly excited, or are apt to become so with the release of the tamponade. Unless they are completely anesthetized, their struggles may interfere with the operation at a most inopportune time.

Suture of the Heart—The incision should be

so planned as to give the best exposure with the least trauma when it is necessary to suture the heart. It must also be made with some consideration as to the position of the external wound. Although the pleura is usually injured when the heart is wounded, further tearing of this membrane should be avoided if possible, for it adds greatly to the shock of the patient. For this reason dissection of the pleura from the pericardium is best begun in the fourth or fifth left interspace because of its lateral reflection at that point. It is of importance to remember that the costomediastinal lines of pleural reflection vary greatly; thus either the left or right pleura may cross the middle of the sternum.

Unless the skin wound is well to the right of the sternum, the approach to the heart should always be made on the left, and the incision should be so planned that it can be readily enlarged if the cardiac wound is not easily located. With these factors in mind, experience has shown that a long transverse incision extending well across the sternum gives the best exposure. The pectoralis major muscle is separated in the direction of its fibers and can easily be retracted from the surface of the ribs. Dissection should begin well out on the rib, which can be easily lifted from its periosteal bed and cut without injuring the pleura. The internal mammary vessels are ligated and cut, the triangularis sterni muscle is divided, and the pleura is displaced outward by careful gauze and finger dissection.

A second incision, and one giving excellent exposure, consists of turning a musculocutaneous flap laterally and removing two or more costal cartilages and ribs. It requires more time to open and close the wall of the chest and is more likely to induce shock.

The intercostochondral thoracotomy (Spangaro) offers a rapid approach to the heart, but not a particularly good exposure. It can be enlarged by cutting or removing the cartilages above and below the incision and by removing a portion of the sternum.

The pericardium will be tense, bulging and blue, and its pulsations will be weak and imperceptible. If the wound in the pericardium is seen, it should be enlarged, or, if not readily found, it is opened between stay-sutures of silk. Occasionally, the cardiac wound can be located before the blood and clots are removed and before the heart starts bleeding profusely. If it is not immediately seen, the blood and clots are removed by suction. When the intrapericardial pressure is relieved, the bleeding becomes profuse, as the contractions of the heart increase in force. When the wound is located, and it is most often found in the right ventricle, its closure is facilitated by placing the left index finger over it. In this way the bleeding will be impeded sufficiently to allow the passage of a suture directly under the finger. This is left untied for the moment and is held in the left hand for traction and hemostasis while other sutures are placed and tied. They should pass well into the substance of the muscle, but not into the chamber of the heart. Fine black silk on curved calix-eye needles is the material of choice.

Should the wound be behind the sternum or on the posterior surface of the heart, a stay-suture passed through the apex, as advocated by Ballance and by Beck, may be of great value. By this means the heart may be rotated into such a position that the wound may be more easily sutured.

Intrapericardial wounds of the great vessels will produce the same symptoms of tamponade as wounds in the cardiac muscle itself. They are difficult to close because of the thinness of the structures. If the wound is in the pulmonary artery or aorta, the hemorrhage may be checked by passing the Trendelenburg probe behind it and thus impeding the flow of blood until the sutures can be placed.

Injuries to the coronary vessels may require ligature, but are not necessarily fatal. I have found it necessary to ligate a major coronary vessel in three instances. All three of the patients survived. When bleeding is so profuse that the wound cannot be located, it is sometimes necessary to resort to the procedure of Sauerbruch. In this, the venae cavae are grasped between the middle and ring fingers of the left hand, and the first finger and thumb are left free to compress the cardiac muscle. Needless to say, such a compression can be carried out for only a few minutes. During the course of any cardiac operation fibrillation of the heart may occur, or it may even stop beating, especially when traction is applied, or direct compression or kinking of the great vessels is employed. Should fibrillation or cessation of the beat occur, the operation should be momentarily stopped until normal contractions are resumed. The injection of 1 cc. of 1:1,000 solution of epinephrine directly into the cardiac muscle is frequently of value in restoring contractions.

Gentle massage by pressure between the index finger and thumb will likewise often restore the beat.

The pericardial cavity is loosely closed with interrupted sutures of silk, and sufficient space is left between the sutures for the escape of any fluid which may accumulate. The muscle, fascia and skin are then closed without drainage.

After the operation the patient should be placed in an oxygen tent. Fowler's position will usually facilitate breathing. Morphine should be administered in sufficient amounts to insure rest and quiet. Since the pleura and lung are often injured at the time of the injury to the heart, hemopneumothorax is frequently present. If its extent is such as to cause embarrassment of respiration, aspiration of the chest should be done, but in the absence of symptoms it is better to allow absorption of the air and blood.

Prognosis—The immediate prognosis depends largely on the interval between the injury and the operation. Delay may cause death from hemorrhage, or tamponade, or both. It likewise depends upon the character and extent of the injury. A bullet usually causes two wounds, with greater hemorrhage and loss of tissue, and the injury rapidly becomes fatal. The postoperative prognosis in cases of this type is largely dependent upon infection. Purulent pericarditis is apt to follow these wounds, which are necessarily contaminated and which may carry with them bits of clothing or other foreign material. Pneumonia resulting from injury of the lung, or as a part of the generalized infection, may likewise follow.

Fifty patients with cardiac wounds have been operated upon by me or my resident staff. Of these, 34 recovered, and none of them has residual symptoms referable to the injury. All of the wounds were produced by a knife or an ice pick except one, which was caused by a bullet. In no instance was operation not undertaken because of the patient's condition. This statement means that in several instances the condition of the patient was so serious that there was practically no hope of recovery. In the case of one patient who was operated upon, the diagnosis proved to be incorrect, and it is only fair to say that some of the patients may have died with cardiac wounds upon whom an operation was not performed.

SUMMARY

1. The treatment of chest wounds is in the main conservative, being directed toward (a) the arrest of hemorrhage and the replacement of lost blood, and (b) the restoration of the normal physiology and dynamics of the cardiorespiratory system.

2. Active and immediate operative procedures are indicated in sucking wounds of the chest, persistent hemorrhage, tension pneumothorax and penetrating wounds of the heart.

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DIAGNOSIS OF ENDOCRINE DISORDERS IN GYNECOLOGY, OBSTETRICS AND GENERAL PRACTICE

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The scope of this paper is one which has been avoided by most busy practitioners because of the necessity of conducting elaborate technical tests. I shall mention some of the classical types of endocrinopathies so that their existence can be recognized and the need for diagnostic tests appreciated. After a confirmatory diagnosis, specific therapy may be carried out.

There are innumerable causes of obesity, both exogenous and endogenous. Successful treatment in one case will meet with utter failure in another. With the introduction and use of diagnostic endocrine procedures, it is possible to establish the etiology in endogenous obesity, thereby differentiating it from exogenous obesity.

Similarly, secondary amenorrhea may be due to innumerable causes, and unless the correct diagnosis is made, therapy usually proves futile. This observation holds true of many of the conditions which the physician sees and which often prove resistant to treatment. They include menstrual disorders, sterility, cachexia, obesity, vasomotor disturbances, dwarfism, dermatitis, asthenia, essential hypertension and diabetes.

In the light of present knowledge, the human body contains seven endocrine glands: the pituitary, thyroid and parathyroid glands, the pancreas, the gonads (ovaries and testicles) and the adrenals. These glands may function normally; there may be hypofunction or hyperfunction. It is therefore possible to have "N" to the third power (N3) or 4,000,000 differenent endocrinopathies when N represents the number of glands

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and 3 represents normal function, hypofunction and hyperfunction.

This multiplicity probably offers the reason why there are more therapeutic nihilists in this field than in almost any other in medicine. The difficulties of establishing a specific diagnosis and carrying out proper therapy, and the chronic nature of most of the endocrinopathies have discouraged investigators from devoting themselves seriously to obtaining a working concept of this field. Further discouragement is met with when one encounters some 3,000 papers written yearly on the subject of endocrinology, many of them contradictory. It is not because of their lack of authenticity that contradictions arise, but because of some modification or variation in their study, in the therapy advocated, or in the drug used.

It is only by recognizing these drawbacks that endocrinology will eventually emerge into a precise branch of medicine. One has merely to take cognizance of what has already been accomplished in the treatment of diabetes mellitus, cretinism, myxedema and Addison's disease to realize the rapid strides that have been made in recent years.

Only a few decades ago Zondek and Aschheim[1] observed that the urine of pregnant women contains a substance which they designated as prolan. This substance is capable, they noted, of producing pseudopregnancy in infantile rats and mice in seventy-two hours. These authors demonstrated convincingly that prolan is a specific hormone and resembles the gonadotropic hormone eleborated by the pituitary gland.

Since their disclosure, much has been accomplished that has led to the isolation of other hormones and the demonstration of their function. Allen,[2] and Allen and Doisy[3] observed that the normal female rat goes through a sexual cycle that in many respects resembles the normal human menstrual cycle. They proved that this cycle is under the influence of the ovary by abolishing the cycle with castration.

Frank and Goldberger,[4] utilizing this principle, determined that if pregnancy urine is injected into castrated rats, the vaginal smear shows changes which indicate that the animal is in estrus. They then concluded that there is in pregnancy urine an estrogenic hormone. Doisy, Veler and Thayer[5] subsequently isolated this hormone, identified it as ketohydroxyestrin and gave it the name of theelin. These authors, together with Loewe,[6] demonstrated the presence of estrin in circulating blood.

In 1932, Collip[7] and his co-workers identified an estrogenic principle in the placenta as estriol, which is water-soluble. Corner and Allen[8] prepared an extract of the corpus luteum of the sow which produced a secretory endometrium in the castrate rabbit and prevented abortion in pregnant animals after castration. The active principle of the corpus luteum was isolated in 1934 by several groups of workers.

In 1926, Smith and Engle[9] demonstrated the existence of a gonad-stimulating function of the pituitary gland. Engle,[10] in 1929, showed that the gonadotropes found in pregnancy urine and those extracted from the anterior pituitary are not the same, because the former are not effective in hypophysectomized animals. Friedman[11] produced ovulation in the isolated virgin rabbit by the intravenous administration of pregnancy urine. This procedure furnished the basis for a simple and rapid pregnancy test.

Fluhmann[12] revealed the presence of an anterior-pituitary-like substance in the blood of pregnant women, but was able to demonstrate its presence in normal menstruating women only in a few cases.

Frank, Goldberger and Spielman,[13] extracting large quantities of blood, demonstrated the presence of the chorionic gonadotropic hormone (A. P. L. or prolan B) in the blood of normal menstruating women from six to nine days following the onset of the previous period. Fluhmann[12] demonstrated prolan A, the follicle-stimulating hormone, in the blood of women with ovarian deficiency due to menopause or castration. This substance is effective, he observed, in stimulating the ovaries of hypophysectomized animals.

A number of investigators, among them Kurzrok,[14] Wilson and Kurzrok,[15] Frank, Goldberger and Spielman,[13] and workers of the Endocrine Research Institute of Philadelphia,[16] showed that in normal menstruating women definite quantitative levels of prolan could be exhibited in urine postmenstrually and that definite quantitative levels of estrogen could be demonstrated in urine premenstrually. They also noted that these levels could serve as a guide in arriving at the status of pituitary and ovarian function. In a recent paper Segal, Steinberg, Shechter and Colton[17] correlated the endocrinopathies with the menstrual disorders.

Utilizing these tests for prolans and estro-

gens, investigators of the Endocrine Research Institute[10] established the normal average excretion of prolan at 50 rat units and that of estrogen at 75 rat units every twenty-four hours. By employing these hormone assays it is possible to determine whether there is dysfunction primarily in the ovaries, in the pituitary or in another gland. It is generally accepted that all of the ductless glands are interrelated and that a disturbance of one causes an imbalance in all the others. Hence, it is important to establish which of the glands was initially responsible in order to correct the malfunction and reestablish normal physiologic function.

It is now properly realized that endocrine treatment should not be given on an empiric basis because the possibility of exaggerating the endocrinopathy would be too great. For instance, if estrogen therapy were given in a case of hypopituitarism, such as Simmonds's disease, it would produce an even greater atrophy of the pituitary and an exacerbation of symptoms. Insulin given in this disease to stimulate the appetite could precipitate sudden death. Similarly, if gonadotropic hormones were administered to persons with hyperthyroidism, their condition would become worse, and if androgens were administered in a case of infantilism, permanent irrevocable dwarfism would result due to premature closure of the epiphyses. By means of the hormone assays, it is possible to determine which hormone is lacking and in what quantity, and thus to administer the substance accordingly.

My observations and conclusions, coinciding with those of Steinberg,[16] are that in the majority of instances in dysmenorrhea, oligomenorrhea, hypomenorrhea and premenstrual tension there is an associated hypopituitarism which, if properly treated, results in a favorable response in from 50 to 70 per cent of the cases. Amenorrhea has been encountered most frequently in hypogonadism, and menorrhagia often in hypothyroidism. Hormone assays conducted in all of these conditions are of considerable value in establishing a diagnosis and criteria for therapy.

Hormone assays are of inestimable value in the diagnosis and treatment of sterility in both men and women. The presence or absence of cyclic changes in the ovary and pituitary function can be ascertained. The cause of aspermia and oligospermia is easily revealed. If one utilizes the results of these assays, considerable success is experienced in the treatment of these conditions.

A differential diagnosis between Fröhlich's syndrome, hypothyroidism and simple exogenous obesity in the child can be made and proper treatment administered in sufficient time to restore normal function. The dreaded Simmonds's disease or pituitary cachexia is readily differentiated from anorexia nervosa, the distinction often resulting in the saving of a life. Women who habitually abort are adequately treated and maintained safely through the period of gestation by applying the results obtained through these procedures.

It is highly probable that the hormone assay would be more generally employed as are the tests to determine the basal metabolic rate, glucose tolerance, blood-urea clearance, blood cholesterol and many other tests if the procedure were not so complicated. I firmly believe that when this test is more generally employed and accepted, many refractory cases of obesity, sterility, amenorrhea, hypomenorrhea, menorrhagia and menopause will prove to be responsive to therapy. By repeated androgen assays, there is presented the interesting problem of predicting the sex of the unborn child from six months on.

DISCUSSION

More important here than in most other divisions of medicine, a proper diagnosis of endocrine disorder must precede rational and successful therapy. Such a diagnosis can be reached only through a searching specialized history and a thorough physical examination in conjunction with all pertinent laboratory data. No one clinching test or observation is conclusive. This principle applies as well in the evaluation of the hormone assays, except in certain isolated cases.

It cannot be denied that the number of potential endocrinopathies arising from the known ductless glands is stupendous. A diagnosis must necessarily be made long before the appearance of the classical picture. Close[18] pointed out through his routine autopsy studies the tremendous proportion of unsuspected specific pituitary cell hyperplasias.

Time-consuming and prolonged therapy, even under the most favorable circumstances, is not infrequently necessary before beneficial results are obtained. In addition, medication is expensive, and the economic strain on the patient may be prohibitive. These are reasons why the nigh universal pernicious practice of "shotgun" therapy of inadequately investigated and incorrectly diagnosed endocrinopathies must be discarded. Powerful synthetic and natural hormonal preparations

have been placed in the hands of the physician. He must be eager to use them, yet cautious in administering them.

SUMMARY

A brief historical background and the recent advances of present day clinical endocrinology are presented.

The importance of proper diagnosis and biologic assays preceding therapy in the various endocrinopathies is discussed.

The dangers and failure of treatment of certain endocrinopathies on an empiric basis are emphasized.

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THE STUDY OF CONCHOLOGY AS A FORM OF OCCUPATIONAL THERAPY

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Several years ago a very successful psychotherapist, Dr. George A. Waterman of Boston, directed my attention to a hobby, or special interest, that could be easily used as an adjunct to psychotherapy in the private or institutional practice of psychiatry. For a long time Dr. Waterman himself has been a conchologist of more than amateur standing and he owns a beautiful and impressive collections of shells. As he told me in detail how he had used the shells in his therapy, I was impressed by the artistic skill he had developed as a person, as a collector and as one who had learned how to direct the energies of the mind and use the resources of any situation toward helping persons become happier and better adjusted, especially those whose troubles were emotional in origin, men and women who were anxious, depressed, introspective, worried, apprehensive, irritable and contrary.

Dr. Waterman showed me not only his shells but his patients and their activities. I visited him in Brooklin, Maine, and in Palm Beach, Florida, and saw him actually at work. His methods in themselves were so personal and so individually variable as to be almost indescribable objectively, but I have attempted to outline them in general in this account, so that if anyone is interested and wishes to do so, he may try them for himself, at least the conchologic part of such technic, if it may be called that.

Quite naturally I would anticipate the criticism from certain quarters that this method, or any approach based on it, is superficial. I readily acknowledge its superficiality, but all beginnings are small. When one remembers that at the present time there are many types of neurotic personality and many neurotic reaction types, and that many of these are poorly understood, it would seem that new approaches should continually be tried in an effort to open more doors and throw more light on the dark closed chambers that hold the ultimate secrets of neuroses.

Is a neurosis essentially constitutional in origin and nature? Is it due primarily to an old traumatic experience? Is it due to libidinous frustration or conflict, or both? Is a neurosis physical in the sense that it may be a biochemical disturbance or an endocrine glandular imbalance?

Or is it the result of ignorance, stupidity and the waste of human energy? Possibly a neurosis may spring from any or all of these, or from none. Its origin remains to be determined.

It is true that the best results in treating neuroses usually are observed in patients whose treatment has been prolonged and intensive. Nevertheless, in certain cases very light treatment, sometimes only a few hours of therapy or one or two interviews, seems to get astonishing results, or may end in favorable changes in personality, or more insight, or better adjustments. The riddles of psychotherapy are not yet entirely solved, and it must still be admitted that analytic, interpretative, inspirational, reeducational and reintegrative approaches all converge on this central problem.

This paper is offered as a "come-on" and "follow-up." It is an attempt briefly to outline some of the general ideas suggested by Dr. Waterman and to indicate in a simple way how they may be applied. If this effort reduces the psychic suffering of one neurotic personality, it is justifiable.

The collection and study of shells as a pastime, or as a professional biologic activity, is understandable and appealing to those who engage in it, but many persons regard it as a limited form of occupation. At the turn of the century, beautiful private collections of shells were common, and there were collectors in almost every community. Few were the parlors which did not boast one or more choice cowries, specimens of *Strombus gigas*, or other striking shells. Interest in this activity, however, began to wane about 1914, and many collections were relegated to attics, barns and storerooms, where they were allowed to gather dust.

As with other hobbies, interest in shells undergoes periods of waxing and waning. In the last few years, the shell has once more come into its own. Genuine attention to conchology is as great now as in any period of the last century. Some part of this renewed interest is due to the more prominent place accorded to biology in the curriculums of public schools and colleges. Many museums have emphasized mollusks in their exhibitions, giving them more space and prominence in displays. Several magazines have called attention to conchology by special numbers, and articles appear from time to time which serve to focus public interest on shells. The last few years have brought revised editions of many standard books on shells and numerous new volumes. Recently the *Saturday Evening Post* published an article about Sanibel Island in Florida, the shell collector's paradise, which was illustrated with splendid colored photographs by Ivan Dmitri. All these have their effect.

Collectors and persons engaged in biologic work do not need to be told about the fascination which mollusks hold for those who take the time and make the effort to become acquainted with that phylum. The uninitiated frequently ask, "What practical use can be made of shells? Why do you take the time they require, or why do you spend money on them?" For every man there is a personal answer to this question. For the physician, especially the psychiatrist, the answer is simple: "I am interested in them myself and besides I find they can be helpful to me in my work."

In the private practice of psychiatry, the patients who are obviously insane and who are unable to live in the ordinary family or community form only a small part of those who consult the psychiatrist. These patients offer relatively few problems to him because the care and treatment which they need can best be given in an institution, either private or maintained by the state or federal government. Many more problems are offered by patients who are not insane, but who are unable for one reason or another to make an adequate adjustment to their environment. There are many persons who are beset temporarily by difficulties for which they cannot find a solution. Often they seek the assistance of a physician trained in the technics of psychotherapy, that is, the treatment of the mental or psychologic ills, from which few, if any, persons are completely free. These patients are sometimes able to carry on most of their customary activities, but they may require reeducation, or may need help in understanding their personality or their situation in order that they may direct their energy toward the ends which will be most useful and socially desirable.

There are a number of methods which may be employed in treating patients who are disturbed. Among these are the forms which depend upon suggestion, to which may be added rest and isolation. The analytic forms of therapy consist of a detailed examination of the patient's past history and present life. Some methods depend on education, stimulation of interest and guidance. In some forms of treatment it may be de-

sirable to break up the patient's habits of thinking in order to lead the way to new paths of reaction and learning. The patient may need to learn self assertion, or perhaps more moderate forms of expression. If fear is the basis of the problem, occupational therapy may help to overcome the lack of self confidence. A great deal of energy may come from within the patient, but guidance of its expenditure is needed in order to develop the inner resources; occupational therapy may be a means of accomplishing this purpose. The patient must learn to help himself. Occupational therapy, such as the collection and study of shells, can be used as one of the avenues of approach to complete this necessary stage of learning and self assistance. Through this form of therapy certain patients have learned to help themselves.

Dr. Kenneth J. Tillotson of the McLean Hospital has noted that although the primary function of psychiatric treatment is to cure and restore, a feeling of accomplishment for the individual patient is also very important and his occupational interests should be considered along with other therapeutic approaches. The form of occupational therapy must be chosen wisely. It should be prescribed after careful consideration of the patient's needs and wishes. Since 1913, occupational therapy has been considered by the American Psychiatric Association as one of the most valuable adjuncts to psychotherapy. The present state of the patient, his earlier interests and education, and his probable future course and mode of living are important factors which determine choice. The type of activity should bear some relation to a realistic existence and it should help to divert the patient's attention from his immediate problems. It should not be so simple that it requires little or no attention.

The patient must be stimulated and guided to a form of activity which will supplant day dreaming and phantasy and which will tend to balance an abnormal mood life, if that is the problem. Galen is believed to have said that occupation is nature's physician, and that statement can be easily understood by observing the effect of occupational therapy on certain disturbed patients.

Some patients need only a little assistance in refocusing their attitudes and attention in states of exhaustion due to excessive nervous fatigue which has been built up after a period of trying situations and great mental distraction. In dealing with these, the psychiatrist must take time to understand the patient, for when psychologic conditions are dealt with, diagnosis cannot be made hurriedly. The laboratory cannot assist, except in a few specific instances, as it does in the diagnosis of physical illness. Under this general category come innumerable patients suffering from "nervous breakdowns," or psychoneuroses, to use a psychiatric term.

The psychoneurosis is almost synonymous with the term "nervous breakdown." It is thought to result from a deep psychologic conflict between the forces of the conscious and unconscious parts of the personality. When the unconscious forces triumph, it can sometimes be said that a psychosis has developed, or that the patient is insane. The factors which bring about these conditions may be any of a large number of possibilities and may have their origin in, or may be precipitated by, overwork, poor adaptation to environment, bad heredity, or lack of knowledge of how to get along with other people. Sometimes the causative factors are so deep-rooted that months of treatment are required before they are apparent to the psychiatrist.

The feelings of some persons, especially when they are young, are often hurt because their psychologic interests and requirements are not gratified and because their talents are not developed. In many cases there is a need for an activity which will aid in maturing their abilities and directing their emotional drives into socially acceptable channels. The participation in an organized hobby such as the collection and arrangement of shells may help them to curb excessive emotional drives for it serves as an additional outlet; also, it may help these patients to pass through periods of psychologic immaturity and reach a point where they have substantially outgrown less mature forms of personality expression. This is not just a theoretic idea; it is a practical possibility. Individuals with problems of personality or adjustment may be observed in every circle of friends, or in nearly every family, or among groups of business associates. Usually the first recommendation of a psychiatrist is that they rest and take things easy until their physical condition is restored to normal, but during this period of rest these patients must be encouraged and reassured on a conscious level so that they will not waste a great deal of energy in worry and introspective thinking. One of the best ways of accomplishing this objective is to interest them in some form of oc-

cupational therapy.

Probably this term calls up a picture of looms for weaving and articles which the patient has made by hand after soul-searing efforts, objects of indifferent use and of questionable quality unless the patient has unusual skill or more than average interest in the project on which he is working. For the intelligent psychiatric patient, the choice of a suitable from of occupational therapy offers many difficulties. I have observed that many patients of this type can often be interested in conchology and that shell-collecting is a form of occupational therapy that is very desirable. In addition, it requires no great specialized skill at the outset nor knowledge that cannot be acquired as part of the activity.

The selection of patients for whom shell-collecting is suitable requires some consideration. Frequently a patient may be moderately interested when the idea is suggested, but the interest will not be sustained except by offering encouragement and a definite plan. Occasionally a psychiatrist will have a patient who has become upset to the point of a "nervous breakdown" by the grueling repetition in his office, store, or other business, of hard work by day and constant worry, much of it unnecessary, by night, so that the time which should be devoted to relaxation is actually used to extend the business day. Such a person needs a change and a leisure occupation. Many of the patients of this type have never learned to play and have never cultivated any interest whatsoever outside their business and family. Among these are the high-geared, hard-hitting, compulsive neurotics who boast that they "have never had a vacation in eighteen years!" There is also the woman whose children are grown up and are now established in separate homes, sometimes at a distance from her. For the first time in her life she finds more time on her hands than she can usefully fill. There is also the patient who, because of a hypersensitive personality, is "not understood" by her family and friends and who finds great difficulty in adjusting herself to her environment. An ideal solution might be to move such patients to a new environment, but if this change were made, their time should be filled in by planned activity so that new problems as pressing as those from which they were removed would not develop. For these and many other types shell collecting is suitable.

The beauty of line, color and form of shells makes a strong appeal to the aesthetic person; the challenge that is offered by identification and classification appeals to the scientifically minded. The preparation of cabinets or containers to house a collection is an appealing phase to the patient who is able to use his hands and tools. Thus, shell collections offer not one but several forms of occupational therapy, all directed toward a single objective. That objective is to help the patient become happier and better adjusted.

I keep about my office a number of my best specimens, lying on shelves or on a table by the patient's chair. In the first few interviews with the patient, no direct reference is made to them. It is not unusual for the patient himself to bring up the subject in the course of the interview, or offer some comment on a particular shell. This display of interest provides an opportunity to ascertain whether the patient has previously been interested in shells. The nature of his remark often indicates whether his reaction to them is positive or negative. If the patient makes no comment, or does not seem aware of the shells, I may, if I think he might become interested, present him with my "Introduction to Conchology." This consists of a cellophane bag containing a small but perfect specimen of some interesting species, *Strombus pugilis,* for example, or some other shell and a history card. He is encouraged to carry the "Introduction" home with him and to do some reading or look up something about shells. On a subsequent visit, the subject of shell-collecting is brought up again. The patient may be given other specimens and may be introduced to new genera or different species of one genus. He may be invited to visit my home to see my personal collection, from which I may give him duplicates.

About all this there is an informal or casual quality so that the patient will not feel that he is having something forced upon him. To insist or urge that he begin to collect shells and learn about them might be the means of building up resistance in his mind which could extend not only to the idea itself but to any therapeutic suggestions the psychiatrist might make. Ideally, the patient should be led subtly to believe that he is himself interested in the idea and that it has originated within his own mind. This suggestion can be accomplished in most instances without much effort. The patient's reaction to

this sort of suggestion is often significant and extremely interesting. The patient often gives himself away. He is off guard, so to speak, so that the offer of shells in a way constitutes a psychologic test of a sort. A special study of resistances, negative reactions and objections is valuable in itself. Too, the way in which negative reactions occur often gives in considerable measure an index of the patient's personality, his character, his underlying problems and his attitudes. In a few cases it has been most revealing and helpful.

In another way, if it is possible to get the patient to talk about the shells, to tell what he sees and to describe what they remind him of, the shells can be used to stimulate free association in patients who accomplish this mental operation with difficulty. It is, in a sense, like a Rorschach test, or modification of it. Actually the patient thereby directs his aggression and spends his energy toward new objects and away from himself, his personal problems and the persons with whom he lives and works. When this method of approach is used, the patient may become more receptive for reeducation and training in new behavior patterns. This particular hobby, as it works out, lends itself well to psychotherapy and serves as an adjunct that furthers the use of suggestion, persuasion, catharsis, and especially transference, which usually becomes improved. It permits the therapist to "become as a child" with the patient; yet it also allows the therapist to assume a parental or teaching role.

The learning, what there is of it, is simple and easy. It can give a strong sense of delight and power. It can give the patient a chance to feel equal with, or superior to, others. Thus, the patient's introspective concern with his internal physical and mental environment may give way to healthier extraversion of his interests, which allows him to regard his problems in a more objective light. Some of the tensions and the bitter, aggressive and often cruel attitudes assume lesser prominence as new interests develop. Often the patient's greatest need is for a happy break in the monotonous repeated round of daily tasks and duties which have allowed no time for relaxation.

With each succeeding visit, the patient is questioned about his shells, if he has begun to collect and learn about them. Definite and detailed suggestions are made each time he visits the office. These, of course, should be suggestions which he can accomplish before the next visit. A book may be suggested which contains information about shells of rare or unusual interest, or he may be encouraged to visit a museum or shell collection. Sometimes he is encouraged to correspond with other collectors, or to exchange duplicates with them in order to enlarge his collection. The reasons for classification are discussed, and new means of displaying the shells are considered. All this requires only a few minutes of the treatment hour, but is well worth while if it helps to sustain interest in the occupational therapy. Officially it need have nothing to do with the formal psychotherapy, though it actually may be a part of it or may reenforce it.

Although shell-collecting does not presuppose specialized knowledge of great extent, it is difficult at first for patients to understand the varieties of shells and realize how many types exist. In overcoming this difficulty, a learning board is especially helpful. It consists of an unpainted wooden frame which is about 2½ inches deep and measures about 15 by 24 inches. The front is a piece of ordinary glass, and the back is a piece of heavy mounting board, preferably tinted green and blue. Typical species of several genera are glued to the mounting board, and a typewritten label is pasted below each one. Some unusual specimen, a starfish, for example, forms the center, and the shells are arranged around it. By frequent reference to this board, the name and shell form soon become associated quite easily in the learner's memory. A sample board may be loaned to the patient, and he is told how he can obtain the material to make his own, if he wishes. Apart from the shells, the cost of the material is negligible.

In many cases, group occupational therapy is more desirable than an individual form, but a combination of the two types is especially desirable. A number of my patients are carrying on a spirited exchange of duplicate specimens and are so much interested in shells that they have little time available to think about their previous problems. One hypochondriacal woman who, a short time ago, regarded nothing as more desirable than a sympathetic ear to which she might tell her real or imaginary personal troubles, now seeks just as assiduously to find someone to whom she may talk about her shell collection. Most listeners find the shells in-

finitely more interesting than an account of the functions of her intestines.

At the Hartford Retreat in Connecticut, a private mental hospital and sanitarium, shell-collecting has been included in the carefully planned program of group activities and is the outgrowth of a loan collection which was exhibited in a recreation hall a few months ago. In the "Chatterbox," the weekly publication of this institution, the growing interest in shells has been noted on several occasions. Here in Boston, the several museums are especially favored by patients who visit them frequently to obtain ideas on arrangement and to verify their own identifications from the collections on display. The University Museum in Cambridge, the Peabody Museum in Salem and the Museum of Natural History in Boston are the best known. There are also a number of smaller museum exhibits in the vicinity of Boston, one at the City Aquarium in South Boston, for example.

Unfortunately, collecting on the beaches in Massachusetts Bay does not yield many specimens, although it is claimed that once there were a number of varieties to be picked up at low tide. For patients who have the time and who can do so, I recommend a collecting trip to Florida or to California. Sanibel Island near Fort Myers is the most prodigal source of semitropical shells that I know. The beach there is literally a carpet of shells. Sanibel is the most southerly of a string of coastal islands running north and south and by reason of its position it is more favorably placed to receive the wealth of shells washed up from midgulf than any of the others, forming, as it does, a sort of coastal barrier. The shallow gulf bottom, the southerly exposure, strong currents and a saline content of water which is favorable to molluscan life make the island unique in this hemisphere. Only the Great Barrier Reef of Australia and Mauritius in the Indian Ocean are said to outrank it in the number and beauty of the shells found on their beaches. Other beaches on the west coast of Florida yield a great many shells, but on the east coast active measures have been taken to rid the beaches of shells because of the swimming, which does not thrive where shells do. All of the West Indies Islands in and near Nassau, Hamilton and Paget's in Bermuda, St. Kitts, Santa Lucia, Trinidad and Cuba are popular objectives for amateur collectors. In California, the Monterey peninsula near Carmel and Pebble Beach, and farther south the region near Santa Barbara and Ventura are also good locations for collectors. These are reasonably accessible and can be reached quickly.

If a patient cannot go to one of the sources, he or one of his friends usually knows someone who may be traveling and who can be persuaded to send or bring back a package of shells. Also they can be ordered from dealers. The cost of shell-collecting can be adjusted to fit the pocketbook, and in many instances material can be obtained gratis from or by friends and relatives. Collecting trips, however, are fine adjuncts to the other forms of therapy, and sometimes a patient who has become interested can be encouraged to go on a short trip to a nearby place or to take a longer journey South for the ostensible purpose of collecting shells when he might be especially resistant to the idea of a journey for the sole purpose of rest or pleasure.

In one way it may be said that neurotics always need a reason or an excuse for everything they do. They use the neurosis as an ego, instead of their will. To some neurotics, shell-collecting, when it is followed as a hobby, seems to develop the functioning of the ego somewhat so that they come to be guided more by this interest and less by symptoms. This change may be observed in patients in whom any strong interest is developed, but it is especially noticeable in shell collectors. One might say that the hobby serves as a focus or focal point around which the energies of the patient, or his budgeting and spending of them, may become organized anew in a fresh, less obviously neurotic and it is to be hoped, a more balanced way. Energy may thus be drawn from the neurotic patterns and may be reconstructed more normally in less neurotic patterns in the patient's life.

A highly desirable feature of shell-collecting as a form of occupational therapy is that it can be carried on independently and requires no special equipment. It is by no means a magic treatment, nor is it a panacea, but I have known a number of patients who have shown great improvement in their external adjustments after becoming interested in conchology. The following brief summary of two cases indicates its value in this respect. I do not offer these characterizations as a scientifically documented report of cases, but rather as sketchy impressions condensed for the purpose of illustration.

REPORT OF CASES

Case 1.—A 60 year old widow lived in a city apartment alone except for her unmarried son. He failed to return home one night, and she was notified the next morning that he had been killed in a motor accident. After his funeral she became agitated and depressed and attempted suicide. After six weeks in a mental hospital, she went home, but stayed in bed weeping and would not see her friends. About this time a box of shells that had belonged to her son was found in the attic. She asked me to take them away. I asked her to tell me about them, and she told of her son collecting them. I suggested that she keep them, add to the collection and give it to a college as a memorial to her son. She was pleased with this idea and began to show interest. This suggestion led to constructive conversations about herself, her life and the uses to which she had put her energy. She developed some insight and more social interest. Her excessive grief subsided, and she began to see friends and to go out, telling others of her plan. She accepted an opportunity to take formal instruction in conchology from a young biologist, who later came to spend his summers with her. These interests led to other social contacts and experiences that ultimately became as normal as they had ever been. She subscribed to a shell magazine, began to buy books on shells and attained far more than amateur's rank as a collector and student. At the age of 65 she is well adjusted, busy and relatively happy, and she has studied and traveled considerably. Her friends say she is a more interesting person than she used to be and they admire her for the way she "took it and snapped out of it." She has had no further depression and recently she told me, "I don't know why it is, but I am as happy as a child when my mind is on my shells." She has promised her collection of shells, now numbering several thousand perfect specimens, to the museum of the department of biology of the university her son attended.

One may say her agitated depression underwent a spontaneous remission, or that she was frustrated and went into an hysterical reaction following the traumatic experience of her son's death, or that her aggression toward her child was sublimated through shells into a semiscientific pursuit and social welfare. Obviously, the shells remained with her as a part of her son that had not been killed. Through them she found him again, in a substitute form, and found herself again. It might be said that this is a working out of an Oedipus situation. It probably is, but the details of her recovery from depression indicated only briefly here, were interesting and striking.

Case 2.—A 49 year old lawyer, who had always worked very hard, had a son in college, a daughter who was a debutante, and a wife who had a social bee in her bonnet. Apart from his checkbook, the family paid little attention to him. He felt neglected and was discouraged. He prided himself on never taking a vacation. "I haven't had one in sixteen years!" he would say.

After a long period of "colitis" that was considered to be of functional or nervous origin he became severely hypochondriacal and went to bed. He developed the fixed idea that he had cancer and prepared to die, as his father did at the age of 50. But nothing happened, except that the family got bored with his illness and ignored him more than before. One day I gave him a box of shells that had just come from Sanibel Island and asked him to unwrap them for me. He did so, and I saw at once that he was interested. I gave him twenty or thirty different species, and the virus took. He began to read and learn and order shells for himself. I told him how interesting and pleasant it was to go on the beach and pick them up at Sanibel Island, and he began to show interest. From then on he was an apt pupil and incidentally he began to talk about himself as he had not talked before. Something had happened. He had "touched bottom." Something was broken. I don't know why, but he stopped being masochistic and stopped expecting his family to pay attention to him and stopped resenting them for not doing it.

One day I told him about the *persona* and *anima*, as Jung described them. I used a shell to illustrate the idea, explaining to him that the *persona* was like the shell and the *anima* was the mollusk living in it. This idea was a revelation to him. He began to grow more aware of himself and his needs as a human being. He began to read and talk about himself and show interest in getting well. He told me of his childhood and his present situation of how he wanted but could not find tenderness and how he needed more outlets for his feelings, especially his aggressive impulses. To make a long story short, he went on with his collection and study of shells, and began to rearrange his life so that more opportunities for personal satisfactions were developed. He took a short vacation alone, the first year, then went South for a month, the next. This trip led to a revival of his old interests in hunting and fishing that had been long neglected and brought him back to membership in a fish and game club, in the administration of which he began to take a very active part. He never speaks of his "cancer" any more. It is now forgotten, I believe, or repressed. And his anxiety has gone elsewhere. He continues his shell-collecting and now has one of the finest collections of Murex shells I have ever seen. He continues to carry on a heavy legal practice and to lead a fairly active social life, but it is better balanced, and the family have become more proud and fond of him, so to speak. They are impressed, in a superficial sort of way, with the change in his personality and his new accomplishments. Recently he said to me something I believe to be significant: "I used to come home in the evening all tired out. All I wanted to do was to have a drink, eat dinner and go to bed. I would often have to dress up, go out and be bored to death. It was hell. Now, no matter how tired I may be, or how full my head is with office work, I find, after working on my shells for two or three hours, that I forget all my business and become as relaxed and refreshed as a boy. It has made a lot of difference to me. I wish I had found it before." His family wishes he had, too, and probably so do the dealers from whom he buys his shells.

The report of these cases illustrates only two of many types. Each case is an individual one that cannot be formulated nor compared with others. The central idea in each instance, I suppose, is to use the shell as a stimulus to elicit a reaction that overcomes the apathy or inhibition of discouragement or conflict. In one sense shells offer an outlet for libido; in another sense they offer an escape from painful reality, internal or external. There are uses for both.

It is needless to speak of the great pleasure a box of shells can give sick, invalid or convalescent patients. They can handle them, draw them, read about them, and study and talk about them endlessly. If "A thing of beauty is a joy for ever," I wish Keats could have seen some shells I know of, before he died. Shells should be a stock item of amusement for children in every sickroom. They are easily disinfected.

Shell-collecting as a cooperative venture may allow several members of a family to participate and may bring about a more sympathetic un-

derstanding between them. Shells appeal to young and old alike, and pleasure and enjoyment may be extracted from them in the same measure as time and interest are given to them. They help to give the patient background and they aid him in cultivating the ability to think independently and to make decisions. It is a mistake to encourage activities that are too fatiguing, but shells are useful in the degree to which the patient's strength and physical reserve allow him to work with them. If he is introduced to shells while a patient in the hospital, he can engage in work with them even more actively after discharge. The single objective should be an ordered and planned activity which will help and encourage the patient and lead the way to new mental health. Records of the progress of the patients should be kept and correlated with the enlargement and improvement of their shell collections, since these are partly dependent on the patient's improvement.

I have not mentioned the land mollusks, but they represent another equally interesting group which can be used in occupational therapy just as well as the sea mollusks. In some cases they are better for occupational therapy since they may be available in regions where the latter are not. I know of few other things which offer so much pleasure to the collector as do shells, with a minimum requirement of money, skill and knowledge. There are few collectors' items which offer so little danger of becoming routine as do shells. It is for that reason that I feel that conchology has a new and undeveloped possibility as a form of occupational therapy.

I do not wish to leave the impression that shell-collecting is suitable exclusively for patients who come to a psychiatrist. On the contrary, convalescent patients, such as those with heart disease, or fractures, or any disorder that limits activity, find them equally interesting. I believe it is an excellent interest and form of study for patients recovering from active tuberculosis, for example. And I have known some alcoholic patients, who drank usually when they were bored, to drink less when they were bored less as the result of becoming interested in shells. Patients suffering from organic illness are, of course, somewhat limited in what they can do for themselves. They are usually limited to material which can be obtained for them and, of course, they miss much of the thrill which comes from collecting by their own efforts. Nevertheless there is still considerable residual pleasure they can experience. It also occurs to me that loan collections of shells with suggestions for their use might be made available by conchologic societies or interested persons to institutions like the Children's Hospital, the cardiac clinics of general hospitals and the social service department of the city hospitals in various parts of the country.

Rare shells might well be used more widely as trophies and prizes, especially for children. Edgar Allan Poe called shells "the medals of creation." I have never seen a child who could not be interested in shells. Children exhibit one constant reaction of special interest: when a child is given a shell, he will place the aperture to his ear, as if listening for the roar of the sea. Children listen in this way without being told that there is a noise in the shell, the noise that times makes, I like to call it.

A WORD ABOUT SHELLS

The mollusks have been described for centuries. In early Greek decoration shells were an important artistic motif. Their outstanding anatomic characteristic is a hard shell, usually external, and a muscular organ, or foot, which has a variety of physiologic functions.

Aristotle in his *Historia Animalium* and in *DePartibus Animalium* described the shells of Mediterranean region. In 1685, Martin Lister wrote a work entitled *Historia Concyliorum*, and in 1799 Cuvier designated the Mollusca as a primary zoologic group. Edgar Allan Poe numbered among his other versatilities a knowledge of shells. His volume published in 1839, *The Conchologist's First Book; A System of Testaceous Malacology*, is an interesting document. It may have been written during the period when he was living on or near Sullivan's Island in South Carolina. In the introduction to the second edition (1840) Poe wrote of his interest in shells as follows:

> Testaceous animals form the principal subsistence of an immense number of savage nations, inhabitants of the seaboard. On the coast of Western Africa, of Chili, of New Holland and in the clustered and populous islands of the Southern seas, how vast an item is the apparently unimportant shellfish in the wealth and happiness of man! In more civilized countries it often supplies the table with a delicate luxury. Nor must we forget the services of the *pinna* with its web, nor of the *purpura* with its brilliant and valuable dye, nor omit to speak of the pearl-oyster, with the radiant nacre, and the gem which it produces, and the world of industry which it sets in action as minister to the luxury which it stimulates.

Excepting the insecta, the mollusks are the largest zoologic division and are estimated to number 60,000 living and 20,000 extinct species. Most of these have been described in the last one hundred and forty years for there were only 2,000 known species in 1800. There are a number of excellent collections in American museums such as those at the Museum of Comparative Zoology of Harvard University, the American Museum of Natural History in New York and the Chicago Academy of Science. They demonstrate a wide range of habitat, being found in salt and fresh water, on land, in trees and in shrubs. They may climb, crawl, swim or burrow in sand, rock or wood. The habitat of a single species may vary at different times of the year.

The chief use of mollusks is for food, although only a limited number of species are so utilized by man, chiefly clams, oysters and scallops. Pearls, of course, have a use in commerce, and the cowries and helmet shells are used in cutting cameos. Paleontologists find fossil shells helpful in determining an era of the earth's age. There are many ethnologic implications of the use of shells, which form a separate field of study.

Probably the rarest shells known are the few specimens of the *Conus gloria maris* or "the glory of the seas." Twelve of these are said to exist. Some of them were obtained from a reef off the Philippines just before the reef disappeared following an earthquake. The Melville cone is very rare also. A few specimens of it have been obtained along the Florida gulf coast.

The value of shells varies greatly. One found at Sanibel Island was sold at a London auction for $2,500. It was a *Voluta junonia*. Today some shells found there sell for as much as $200, and many sell regularly for from $3 to $30. At Sanibel, Florida, shell exhibits are held annually, most of the collectors specializing in a few groups. There is a case of shells from Sanibel Island in the British Museum.

In collecting, the necessary equipment is simple. Cardboard boxes for transfer purposes, a basket or a paper bag, rubber beach shoes and a hat are all that one requires, excepting curiosity and perseverence. At first, a shell collector picks up every specimen, but soon discriminates and passes by all but the most perfect. Although the species known run into thousands, there are a number of families which predominate on the eastern seaboard of North America. They are listed, and a similar list could be prepared for the Caribbean and Pacific regions.

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MASSIVE RESECTION OF THE SMALL INTESTINE

EXCISION OF TWELVE FEET SIX INCHES, WITH RECOVERY

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Resection of a large amount of the small intestine is seldom an elective procedure, for the alternative of allowing the patient to die or of resorting to an extreme measure in an effort to save his life by resection is the alternative that confronts the surgeon. Extensive resection with favorable results may occur less rarely than is generally believed.

As early as 1880 Koeberle[1] reported perhaps the first massive resection of the small intestine; the patient recovered following the removal of 205 cm. of this portion of the bowel. Cases were reported from time to time thereafter, and a number of authors reported studies of collected cases that indicated a fairly high percentage of recovery and warranted the expectation of good functional results. A study by Dorow,[1] made in 1932, brought the number of cases recorded to 97, and in this series he reported a mortality rate of 18.6 per cent.

In 1935 Haymond[1] analyzed 257 collected cases of massive resection of the small intestine

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in patients whose ages ranged from 8 to 76 years and in whom the mortality was considerably higher above the age of 30 years. The percentage of good results in this series of cases was relatively the same for both sexes, but poor results occurred more frequently among women. The common causes were volvulus, strangulated hernia, mesenteric thrombosis, diseases of the mesentery, diseases of the pelvic organs of women, abdominal injuries including war wounds, tuberculosis of the small intestine, and such miscellaneous causes as adhesions and bands, invagination of a polyp, intussusception, gangrenous appendix and gangrenous ileum.

The length of the small intestine varies widely in different persons. The consensus among a majority of investigators is that it is somewhat less in women than in men. Haymond[1] reported that in 1,161 cases the average length was 21 feet 6 inches. The length varies from 18 to 26 feet, the average being 19 feet, according to Sarnoff.[2] This author concluded that one half of the small intestine may be removed without endangering life, but that the removal of 80 per cent proves fatal to animal and man alike. He mentioned 5 cases in which the lengths of the portions resected successfully were 540, 534, 520, 475 and 400 cm., thus ranging from 13 to 18 feet. While the patients in these cases survived the operation, nearly all died shortly afterward. Haymond[1] concluded:

> Discounting the dangers of the operation itself and its concomitant possible complications, a patient can withstand a massive resection of 33 per cent of the length of the small intestine and expect the digestive tract to return to normal function; 50 per cent removal constitutes the upper limit of safety in extensive enterectomy; and resections above 50 per cent must necessarily obtain poorer results even though an exceptional case may be better than predicted.

The removal of lengths measuring 200 cm. or more has long been regarded as extensive resection.

Diarrhea is the most frequent and also the most disturbing postoperative complication, both clinically and experimentally.[1] It must of necessity be controlled by dietary management as it cannot be controlled by drugs. Haymond[1] observed that in his series of 257 cases of extensive enterectomy the mortality rate of 33.5 per cent does not represent the true operative mortality of this spectacular procedure because the tendency is to report only the successful cases. Good results after survival of the operation depend in his opinion on the condition and length of the small intestine remaining, on the disease condition that necessitated the massive resection, and on the feeding of a diet poor in fat, adequate in protein and rich in easily assimilable carbohydrates.

In 1940 Todd, Dittebrandt, Montague and West[3] reported a summary of three periods of metabolic study carried out since 1935 on a man with all but 3 feet of the small intestine removed surgically. They observed that carbohydrates were utilized normally in all three periods. The proteins were not so well absorbed; the percentages for the three periods were 76, 75 and 69. Because of its direct effect on the absorption of calcium, the metabolism of fats was of particular interest. It was learned that more calcium was lost when larger amounts of fats, largely in the form of fatty acids, were excreted in the feces. The excretion of phosphorus tended to parallel the excretion of calcium. In this case tetany was obviated only by a diet very high in calcium and vitamin D (viosterol); the condition was controlled more easily with an intake high in carbohydrates and low in fats.

The case presented is of interest in that there were no immediate premonitory indications of the sudden acute attack characterized only by agonizing pain and in that recovery of the patient was rapid, without incident and accompanied by prompt restoration of normal function following the removal of 12 feet 6 inches of the small intestine.

REPORT OF CASE

W. R., a white farmer aged 36, married, was admitted to the Tampa Municipal Hospital on Nov. 6, 1941, complaining of severe epigastric pain. He had been suffering from a gastric disturbance for approximately fifteen years. In October 1939 he had been operated on in South Carolina for a perforating peptic ulcer. Since that time he had suffered from dyspepsia, which was relieved only after antiacid medication.

Having retired the night before feeling normal in every respect, the patient was awakened at 4 a. m. on November 6 by a knifelike pain in the upper portion of the epigastrium beneath the tip of the ensiform cartilage. En route to an outside toilet he experienced increasingly severe pain and fell unconscious to the ground. His wife found him in a convulsive seizure and with aid removed him to his bed. On regaining consciousness thirty minutes later, he requested a glass of milk, which had often relieved the dyspepsia previously. After drinking a small amount of the milk he again experienced increasingly severe pain and vomited for an hour with the pain unrelieved.

When admitted to the hospital at 7:55 a. m., the patient was suffering agonizing cramplike pain in the epigastric region. The temperature was 96.8 F., the pulse rate was 54, and the respiratory rate was 16. The blood pressure was 126 systolic and 88 diastolic. Physical examination revealed a well developed man with pain as the one outstanding indication of acute illness. Peristaltic sounds could be heard. A tentative diagnosis of perforating peptic ulcer was made. He was given 1/6 grain of morphine and 1/150 grain of atropine at 8:35 a. m.,

and was prepared for surgery. Upon arrival in the operating room he was perfectly comfortable and had no complaint whatsoever; the abdomen was flat and soft, and the pulse was strong. It was concluded that some gastric disturbance was responsible for the acute pain, and he was accordingly returned to his room for observation. Roentgen examination of the abdomen for free air and fluid levels was then made, but gave negative results.

At 3 p. m. the patient again experienced severe epigastric pain. At this time the temperature was 97.8 F.; the pulse rate was 64, and the respiratory rate was 22. He was given 1/6 grain of morphine. He slept until aroused at 6:30 p. m., at which time he was in no pain. Some tympanites below the umbilicus was now noted for the first time, and only an occasional tinkling was audible upon auscultation of the abdomen.

The results of urinalysis were essentially negative. On examination of the blood at 10 a. m. the hemoglobin estimation was 58 per cent; the count was erythrocytes 3,400,000, leukocytes 9,800, polymorphonuclears 88 and lymphocytes 12. The nuclear index determination was 8, and the color index determination was 0.9. At 7 p. m. the count was erythrocytes 4,100,000, leukocytes 25,400, polymorphonuclears 93 and lymphocytes 7. The hemoglobin estimation was 78; the nuclear index determination was 5, and the color index determination was 0.9. It was apparent that a necrotic process was present, but there were no clinical symptoms to indicate its location. The Kahn test gave negative results.

At 7 p. m. the patient suddenly began to show signs of shock and was ordered prepared for surgery. At 8:30 p. m. a soap-suds enema yielded good results. When he was sent to the operating room at 9:30 p. m., his condition was poor. The blood pressure was 80 systolic and 60 diastolic, and the respiratory rate was 20.

At operation, an upper right rectus incision was made. The peritoneal cavity contained about 100 cc. of serosanguineous fluid. A large mass of small intestine, dark black in color, was encountered, and the mesentery supplying this strangulated portion of intestine was likewise black and was pulseless, its appearance resembling that observed in mesenteric thrombosis. There was a large rent in the mesentery, which had contracted, strangulating 12 feet 6 inches (375 cm.) of the small bowel. The strangulated section was composed both of jejunum and ileum. The necrotic portion of the bowel was resected, and after excision only 12 inches of the jejunum remained. An end to end anastomosis was made of the remaining bowel, and the mesenteric sheath was approximated with black silk. Eight grams of sulfanilamide was placed in the abdomen, and a cigaret drain was instituted. The infusion of 2,000 cc. of a 5 per cent solution of dextrose in normal saline was given as a continuous drip during the operation. Nitrous oxide combined with oxygen and ether was the anesthetic used.

The operation was concluded at 11:50 p. m. The condition of the patient was fair. The blood pressure was 90 systolic and 35 diastolic. The pulse rate was 100, and the respiratory rate was 18.

The postoperative diagnosis of strangulation of a large portion of the small intestine with passive congestion and necrosis was confirmed by the pathologic diagnosis. The report of Dr. H. R. Mills, pathologist, follows:

> The specimen from the above patient consists of about 375 cm. (12 feet 6 inches) of small intestine which shows marked passive congestion with the exception of about 15 cm. of healthy tissue at each end of the specimen. Opinion: passive congestion and necrosis of small intestine.

One hour after the operation the patient began to show evidence of shock. The blood pressure was 88 systolic and 58 diastolic; the pulse rate was 120, and the respiratory rate was 22. Seven and one-half grains of caffeine sodiobenzoate was administered. By 2:30 a. m. on November 7 he had fully reacted, and Wangensteen suction was begun. Infusion of 1,000 cc. of a 5 per cent solution of dextrose in normal saline was carried out, and thereafter this treatment was continued every eight hours for five days. At 4 a. m. the patient received 500 cc. of citrated blood by indirect method. In like manner he received 250 cc. on the second postoperative day, 500 cc. on the third postoperative day and 250 cc. on the fifth postoperative day.

On November 8, the first postoperative day, the blood pressure ranged from 88 to 124 systolic and 64 to 84 diastolic; the temperature was 101 F. At 9 p. m. the patient vomited a small amount of thick mucous material. One hour later he was given 7½ grains of caffeine sodiobenzoate subcutaneously, and the dose was repeated every four hours during the night. When necessary, ¼ grain of morphine was given for pain.

On November 10, the third postoperative day, the temperature was 102.8 F., the greatest elevation recorded; the pulse rate was 106, and the respiratory rate was 24. The drain was removed from the wound, and the patient was given 5 Gm. of sodium sulfathiazole. On the following day the Wangensteen suction was discontinued. The patient was allowed a full diet of liquids without milk, which was added two days later. The first bowel movement occurred on this day, and four days later regular bowel movements were established. On November 13, the sixth postoperative day, the temperature was normal for the first time since the onset of the attack. The patient was placed on a soft diet the next day and on a light diet three days later.

The wound healed by first intention, and on November 21, the fourteenth postoperative day, the patient was discharged from the hospital in good condition. During the entire period of hospitalization following the operation his only complaint was slight weakness.

On December 20, four weeks after discharge from the hospital, the patient visited my office. He related that he was having no discomfort, had had no dyspepsia since the operation and was having a daily bowel movement. There had been a gain in weight of 11 pounds. When he again reported to my office on April 4, 1942, he had gained 20 pounds since the operation five months previously. He stated that he felt better than for fifteen years and had normal elimination daily; his appetite was very good and he ate anything he pleased from cabbage and pork chops to sweet potato pie. He was engaged in farm work, plowing and digging fence posts without experiencing inconvenience.

COMMENTS

This case is noteworthy in that resection of 12 feet 6 inches (375 cm.) of the small intestine, more than half its entire length, was a matter of dire necessity rather than of choice.

The patient presented no symptoms or signs typical of a condition requiring such extensive resection, namely, diarrhea, loss of weight, sensitivity of the intestine, anemia, inability to digest fats, or tetany.

Anastomosis was evidently satisfactory; otherwise a fecal fistula would have developed.

There was no evidence of obstruction postoperatively.

Owing to the use of Wangensteen suction, little absorption took place in the gastrointestinal tract for a period of five days after the operation, during which time an infusion of 1,000 cc. of a 5 per cent solution of dextrose in normal saline was carried out every eight hours.

Nutrition was well maintained as evidenced by the patient's gain in weight.

Obviously, this is only a preliminary report, and the ultimate outcome over a period of years is awaited with particular interest.

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MERALGIA PARAESTHETICA

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Meralgia paraesthetica is a disease marked by paresthesia and disturbances of sensation in the anteroexternal surface of the thigh, in the region supplied by the external cutaneous nerve. Meralgia is derived from the Greek words meros, meaning thigh, and algia, meaning pain. Paresthesia is any modification of sensibility and is manifested as a perverted sensation.

This disease, which as late as 1925 was considered rare, is recognized more and more commonly. It was first described by Bernhardt[1] and Roth[2] independently in 1895, and in 1921 Goldstein[3] stated that 135 cases had been recorded in the literature. Since then many series of cases have been reported. In 1938 Ecker and Waltman reported 150 cases and gave some interesting statistics. The incidence of this disease at the Mayo Clinic, they noted, is about 3½ cases in 10,000 as compared with 94 for sciatica and 116 for other forms of peripheral neuritis.

Etiology.—After reading the available literature I have come to the conclusion that there may be many causal factors. While one essayist concludes that the affection is one of the root of the nerve, another is of the opinion that it is a disturbance of the peripheral portion. It has been ascribed to such vague causes as trauma, infections, syphilis, alcoholism, obesity, pregnancy and disturbances owing to a static condition of the foot. The majority of the cases are observed in the fourth, fifth and sixth decades of life, and from 70 to 75 per cent occur in men.

Anatomy.—The external cutaneous nerve is a sensory nerve arising from the second lumbar nerve and having a common origin with the genitocrural nerve, sometimes forming a loop with the third lumbar nerve. It perforates the outer border of the psoas muscle and crosses the iliacus to the notch immediately beneath Poupart's ligament, entering the thigh where it divides into an anterior and posterior branch. The anterior branch becomes superficial about 4 inches below Poupart's ligament and is distributed to the integument along the anterior and outer surface of the thigh. I have given this description of the nerve because it is hard to understand why any of the causes named should affect only the anterior branch of the external cutaneous nerve.

Pathology.—In some cases definite impingement on the roots of the nerve takes place as a result of a spondylitic process in the spine; again, cases have been reported in which the nerve was definitely compressed under the inguinal ligament. There seems to be no constant pathologic process. Frequently posture and weight are faulty. In the series of cases reported by Ecker and Waltman[4] roentgen examination disclosed normal lumbar vertebrae in 38 out of 83 cases, hypertrophic arthritis of the lumbar vertebrae in 25 cases, spina bifida occulta in 7 cases and scoliosis in 4 cases; in 5 cases the primary lesion apparently affected the roots of the nerve within the spinal canal, and in 12 cases there were definite bony changes. Painstaking study is necessary to determine the nature of the pathologic changes in a given case.

Symptoms.—The disease is usually unilateral, and one side is as frequently affected as the other. It manifests itself bilaterally in about 22 per cent of cases, but it usually begins first on one side and later on the other. Often the patients have had symptoms for a year or longer before seeking aid, and I have no doubt there are many who never consult a physician. Numbness is the most common and earliest symptom; tingling, burning, formication, tactile hyperesthesia and pain are other symptoms. The pain is not constant, varies in degree and is sharp and shooting. All these symptoms are aggravated by walking or standing. There is usually slight objective disturbance of sensation, anesthesia or analgesia, and occasionally trophic disturbances in the skin and hair. The subjective phenomena vary with the individual person. Some complain bitterly of the

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hyperesthesia and some of the pain.

Prognosis.—In most cases no specific treatment is required. In about 50 per cent of the cases complete or almost complete relief is attained in a varying length of time that ranges from two to four years. In other words, as Ecker and Waltman[4] reported, "when the symptoms have lasted less than two years, the chances are two to one that they will disappear spontaneously within another two years." Cases have, however, been reported which lasted as long as thirty-five years, and many cases have been so intractable as to require operative interference.

Treatment.—In a large percentage of cases all that is necessary is for the physician to explain to the patient that he thoroughly understands the condition and to advise him that he may take one of the simple analgesics, such as aspirin, from time to time as necessary. When the symptoms demand active treatment, the physician may resort to injection, neurolysis, resection of the nerve or even laminectomy. Resection is the standard operation, and the results usually are completely satisfactory.

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DISEASES OF THE GALLBLADDER AND THEIR RECOGNITION

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Diseases of the gallbladder are among the diseases most commonly occurring within the abdomen. Statistics relating to findings at necropsy indicate that as high as 60 per cent of the gallbladders examined may reveal pathologic changes. It is estimated that fully 10 per cent of the adult population past forty years of age have gallstones. These figures vary with the source of autopsy material and should be accepted as the minimum, not the maximum, for cholecystitis catarrhalsis is not often recognized grossly except by the expert.

The incidence of cholecystitis and cholelithiasis is considerably higher in industralized countries than in those chiefly agricultural. The oriental and the Negro races are relatively free of involvement of the gallbladder. Diseases of this organ are about three times as prevalent in women as in men. Pregnancy appears to increase this ratio; from 75 to 80 per cent of the women operated upon for gallstones have been pregnant.

When one considers the diseased gallbladder, it is needless to make distinction between cholecystitis and cholelithiasis for each is a phase, or part of a sequence, denoting degrees of irritation, the end result of which is likely to be metaplasia. Gallstones were found in 95 per cent of the cases of primary cancer of the gallbladder reported by Siegert.[1]

To illustrate to process better one need only consider the physiologic functions of the gallbladder. Its general functions are not dissimilar to those of the adjacent structures of the digestive tract, namely secretion, absorption, motor activity and storage capacity. Each of these properties is essential to a normal functioning of the gallbladder. Any disturbance of function may result in alterations of the chemical constituents or motor activity, thereby setting up and perpetuating a pathologic process.

The exciting cause of disease of the gallbladder is always bacterial infection. This organ, like other viscera possessing a mucous membrane, is subject to catarrhal, serofibrinous, suppurative and phlegmonous types of inflammation.

There are several routes by which infection may reach the gallbladder:

1. By way of the general circulation from sources over the entire body to the hepatic artery, thence to the liver and through secreted bile to the gallbladder.

2. From the alimentary tract by way of the portal vessels.

3. From the intestines by a direct ascending infection of the common duct.

4. Infection by extension from an adjacent inflamed viscus.

5. By the numerous chains of connecting lymphatics.

There are two predisposing factors to infection of the gallbladder, (1) motor disfunction, which may result in stasis and direct chemical ir-

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ritation of the mucosa, and (2) disturbance of cholesterol metabolism. Both of these factors are observed in a high percentage of cases of pregnancy, especially in the latter months and the early postpartum period.

The gallbladder possesses unusual powers by which it concentrates bile; cystic bile may be from five to ten times more concentrated than bile obtained from the bile ducts. The degree of concentration is increased when the relative emptying time is delayed as during the latter part of the term of pregnancy when the gallbladder is sluggish and emptying is greatly delayed. A rise in the cholesterol content of the blood, or hypercholesteremia, occurs and is accompanied by a corresponding rise in the cholesterol content of the cystic bile. Bile acids in sufficient concentration tend to maintain this suspension of cholesterol in the cystic bile. The bile salts and bile cholesterol are in turn dependent in part for their concentration on the normal functioning of the cells of the liver. The evidence is insufficient to warrant the conclusion that the toxemias of pregnancy may produce enough damage to the parenchymal cells of the liver to diminish the supply of bile salts in the presence of a high cholesterol content and to produce a precipitation of the cholesterol and the formation of stones.

It is interesting, however, to note Potter's observations in his report of 390 cases of cesarean section. In these cases the gallbladders were manually examined; 75 per cent of them were fully distended and showed evidence of biliary stasis. Examination of the bile removed from these organs by direct puncture revealed a high cholesterol content, and the acid-cholesterol ratio in 62 per cent of the entire series was low. Potter[2] concluded that disorders of cholesterol metabolism and motor dysfunction or stasis are the forerunners of biliary diseases in pregnant women.

It should be of interest to observe future studies of disease of the gallbladder with special reference to the role certain female hormones may play. As previously mentioned, the disease is more prevalent in women, and pregnancy increases this ration; also, the disease often manifests itself in the forties near the climacteric.

The diagnosis of diseases of the gallbladder should be made with greater ease today than in the past because of improved diagnostic facilities, such as roentgen and electrocardiographic studies and laboratory examinations. These aids throw light on the pathologic changes in the gallbladder and on the manner in which they may be associated with disorders of other organs.

It is with relative frequency that one observes disease of the gallbladder associated with diseases of the heart. Congestive heart failure predisposes to this disease in two ways, by restricting the motion of the diaphragm and by facilitating infection of the biliary system because of the intestinal congestion present. Disease of the gallbladder may mimic coronary thrombosis. I have seen definite electrocardiographic changes caused by gallstones. This phenomenon was probably due to a nervous reflex mechanism rather than a toxic manifestation. The differential diagnosis of coronary thrombosis and disease of the gallbladder may be a difficult problem during the first twenty-four hours of the illness.

In diseases of the gallbladder many clinical problems arise. Women patients sometimes give one a perfect history of a menopausal syndrome and improve on estrogen therapy. After a reasonable lapse of time, it becomes apparent that the patient is receiving no further benefit even with increased dosage of estrogens. A careful study of cases of this type often reveals a coexisting disease of the biliary system, and, when it is properly cared for, the symptoms attributed to the menopause disappear.

A few years ago the gallbladder received considerable attention as an important factor in foci of infection. This factor remains important today, and the far reaching effects of diseases of the gallbladder on all tissues of the body should not go unrecognized.

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The Journal of The Florida Medical Association

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MEDICAL OFFICERS RECRUITING BOARDS

Every one who has read the Journal of the American Medical Association, or the June issue of Medical Economics, should be familiar with the mechanics of the Procurement and Assignment program. To review briefly, each county has been asked to form its own Procurement and Assignment committee. This committee has a responsibility of dual importance, to determine which members of its medical society can be spared for military duty, and which ones are essential to the needs of the community. In its decision the committee must realize that the practice of medicine cannot continue as usual, but rather that some program of rationing of medical care is in order. This responsibility should be taken seriously by the local committee. In some instances a committee has reported that practically all physicians in its community are available; in others, that no one can be spared. Obviously a medium should be reached by carefully weighing each individual case. A local committee should not take into consideration a physician's physical condition, as his fitness is determined by an official examination.

A meeting of representatives of the Procurement and Assignment Service, the Surgeon General's office, the Adjutant General's office, and the Selective Service Headquarters was held in Washington April 24, for the purpose of streamlining the methods of obtaining a commission. There was created at this time a Medical Officers Recruiting Board for every state in the Union. The Board for Florida is located at Camp Blanding.

The Medical Officers Recruiting Board obtains the names of those men who have been declared available by their own local committees, from the State Chairman of the Procurement and Assignment Service. The Board then contacts these physicians and offers them a commission, which it has the authority to issue in the rank of first lieutenant and captain to those below the age of 45. When the volunteer is between the ages of 46 and 55, or when he is qualified to apply for the rank of major, the Board completes the application and sends it to the Surgeon General for final action. The State Selective Service Headquarters is extending every cooperation in this program. It accepts the ruling of the local Procurement and Assignment committees in classifying physicians who are registrants.

Information has been received that the method of obtaining physicians for the armed services through the Procurement and Assignment Service is, as a whole, not producing the number of physicians necessary. Although several hundred names have been given the Medical Officers Recruiting Board in Florida, to date, June 29, only 36 physicians have been commissioned by this Board.

It has been repeatedly emphasized that through the Procurement and Assignment Service the physicians of this country have been given the opportunity to settle their own problem, that of providing sufficient medical personnel for the armed services, and of seeing that local communities are not stripped of all medical service. No other group in the country has been given a similar opportunity.

It was pointed out by Mr. Paul V. McNutt in his address to the house of delegates at the A.M.A. convention (reprinted in the June 20 issue of the J. A. M. A.) that if this method of obtaining the necessary medical personnel for the armed services does not work, and work soon, a more vigorous program will have to be adopted. There is no question as to what he meant.

It is hoped that every physician will take stock of his own situation, remembering that the fate of the practice of medicine, as we know it, is at stake, and that we are at WAR, a war that is going to require the wholehearted and complete support of every person in the country, and a war which, if lost, will destroy life, liberty and the right to the pursuit of happiness.

INACTIVE PHYSICIANS URGED TO RE-ENTER PRACTICE TEMPORARILY

Elsewhere in this issue appears an editorial from the Journal of the American Medical Association stressing the need for physicians for the armed forces, a need which must be supplied without depleting medical service for civilians. In a letter recently received by Dr. T. Z. Cason, Chairman of our Association's Committee on Medical Postgraduate Course, the American Medical Association pointed out that one way in which to help solve this problem is to urge able-bodied inactive physicians to resume practice during the war, thus releasing others for military service.

It is realized that in many instances these inactive physicians may feel in need of a refresher course before again entering practice. The Committee on Medical Postgraduate Course of the Florida Medical Association is willing to make available such graduate instruction should a number of physicians desire it. The following letter was mailed to secretaries of county medical societies in an effort to determine how many physicians in this class are willing to resume active practice. It is reproduced here for the benefit of readers of the Journal who failed to secure the information from the letter.

June 29, 1942.

Dear Doctor:

Your Committee on Medical Postgraduate Course has been asked to determine the need for a refresher course "to prepare physicians, who may have been inactive in the field of general practice, to assume community responsibilities in the present emergency." In order to determine the need for such a course it will be necessary for the Committee to know the number of physicians in the state who desire postgraduate work.

If a sufficient number of Florida physicians desire a refresher course, your Committee will immediately make the necessary arrangements as an aid to physicians who are willing to get back into active practice. If a refresher course is put on, it will probably be held in Jacksonville in connection with the Duval County Hospital. Adequate and reasonable maintenance may be secured within two or three blocks of this hospital.

In order that necessary arrangements may be made by your Committee, and that I may have the necessary information to forward to the American Medical Association, Council on Medical Education and Hospitals, in the quickest possible time, won't you please submit the names of doctors in your area who are not in the active practice of medicine and who are willing to resume practice on a temporary basis.

Sincerely yours,

(Signed) T. Z. CASON, *Chairman*
Committee on Medical Postgraduate Course.

PUBLIC MUST AID DOCTORS IN MEETING NATION'S WAR NEEDS

Preventable illness and unreasonable demands on the time of physicians must be reduced to a minimum because of the urgent need for physicians for the armed forces, Paul V. McNutt, chairman of the War Manpower Commission, declared in a special statement for The Journal of the American Medical Association on "The Procurement of Physicians." The statement, published in the June 27 issue, is as follows:

On June 8 I described to the American Medical Association at its Atlantic City meeting the acute need for physicians for the military services. I pointed out how far the recruitment of physicians lagged behind expected quotas. In conclusion I stated bluntly the fact, which could not have been evaded by any analysis, that unless voluntary recruitment progressed more rapidly some more rigorous form of selective service must be resorted to.

Those facts were necessary in order to permit the medical profession to diagnose its own case. And the case is urgent; physicians are members of what is probably the most indispensable of all professions. Despite the harshness of the facts and the bluntness with which I had to state them, I felt that the profession should be informed.

In fairness to the recruitment record of many of our states, it seems in order at this time to give the profession some further idea of how its problem is distributed. The failure of a sufficient number of physicians to volunteer for military service is not spread thinly over the whole country. There is an acute lag in certain populous states. Other states have supplied nearly all that they should supply.

We need more than twenty thousand additional physicians by the end of this year. But eight states—New York, Illinois, California, Pennsylvania, Massachusetts, New Jersey, Michigan and Ohio—should account for nearly sixteen thousand of that shortage.

By contrast, sixteen states have fewer than a hundred physicians to go to reach the total number they should supply. In order not to deplete unduly available medical service in those areas, we are asking that the Medical Officers Recruiting Boards be withdrawn and that further enlistments from those areas be then discouraged except in the case of the men under 37 in the urban areas. Those states are Alabama, Arizona, Delaware, Idaho, Louisiana, Mississippi, Montana, Nevada, New Mexico, North Dakota, South Carolina, South Dakota, Utah, Vermont, Wyoming and Virginia.

The acute problem for the next few months for those states is an equitable distribution of medical service within their borders. This will avoid the necessity for any consideration of plans to allocate doctors from other states to meet civilian needs.

More than one hundred and thirty thousand physicians have returned their registration forms to the Roster for Scientific and Technical Personnel. Those forms are now being processed. When that work is complete we shall be able to give the profession a more comprehensive report on the relation of available medical service to wartime needs.

The seriousness of the deficit in the number of physicians available for armed forces should not be underestimated. The need must be met. It will be met by one method or another. Neither must we underestimate the serious drain this puts on available medical services in civilian communities. It will mean long hours and hard work—sacrifices which will multiply the deep debt that every community owes to its physicians.

It cannot be met simply by multiplying the hours of the physicians who are left. There will be a real need to

exercise every possible means for minimizing unnecessary medical services in order that the real needs may be met.

It is my belief that the lag in recruitment has been due chiefly to the fact that the individual physician has not realized the genuine urgency of the need. Measures must be taken which will bring those home to every individual. This means that there will have to be some education of the general public. Preventable illness must be reduced to a minimum. Unreasonable demands on the physician's time must be reduced to a minimum. Thus only may available medical service adequately cover the needs.

An editorial in the same issue of The Journal stated:

Elsewhere in this issue appears a statement by Mr. Paul V. McNutt, chairman of the War Manpower Commission, under which the Procurement and Assignment Service for Physicians, Dentists and Veterinarians functions, relative to the urgent need for physicians for the armed forces at this time. Mr. McNutt recognizes the indispensable character of the physician for both military and civilian needs. He makes clear that eight states—New York, Illinois, California, Pennsylvania, Massachusetts, New Jersey, Michigan and Ohio—must supply most of the physicians needed for the armed forces at this time. Some of the states have already supplied so many physicians in proportion to their total medical population that recruitment in those states is to be discontinued now or in the near future.

The medical profession cannot be accused of failure to play its part in any way in relationship to the war effort. Every one who is participating in the recruitment of physicians recognizes that there have been what are now called innumerable "bottle necks" to be cleared away from time to time as the effort has progressed. More than one hundred and thirty thousand physicians have already returned the registration blanks sent out by the National Roster of Scientific and Technical Personnel. These replies have been coded, and punch cards have been made for them. Any physician who has failed to receive an enrolment form from the National Roster should write at once to the National Roster of Scientific and Technical Personnel, in care of War Manpower Commission, 916 G Street Northwest, Washington, D. C., requesting that an enrolment form be sent to him.

Shortly there will be sent to every physician who indicated that service in the United States Army Medical Department would be his first choice or his second choice a letter as follows:

WAR MANPOWER COMMISSION
Procurement and Assignment Service
Washington
Procurement and Assignment Service for
Physicians, Dentists and Veterinarians

Dear Doctor:

You have indicated your willingness to serve the Nation in this great emergency. The Procurement and Assignment Service of the War Manpower Commission now calls on you to enter the Service. Please apply at once for a commission. You have been selected from among the available physicians in your community by a process that is believed to be fair and impartial.

Complete and mail the enclosed post cards immediately. The Office of the Surgeon General or his representative will provide the necessary application forms and authorize the time and the place for your physical examination.

Do not take any definite action regarding your practice until you receive specific instructions from the War Department. Each physician who is commissioned is routinely allowed fourteen days to wind up his affairs after receipt of orders from the War Department.

The rapidity of recruitment now in effect makes this communication necessary and requires your full cooperation. Please do not delay.

Sincerely yours,
Frank H. Lahey, M.D.
Chairman, Directing Board
Procurement and Assignment Service

Enclosures
No. 92 6/22/42

With this letter will be enclosed two postal cards, which will secure prompt action in relationship to receipt of application forms and proper notification of the action taken in the responsible agencies in Washington.

The needs of the armed forces for physicians are immediate; unquestionably those needs will be met. Physicians who are under 37 years of age and who have been classified by the Selective Service are susceptible to restudy of their situation and reclassification as these needs become more and more urgent. The medical schools, hospitals, public health departments, industrial concerns, in fact every agency utilizing the services of physicians, must cooperate by restudying the men classified as essential, so that only those who are actually essential in the most restricted sense of that word will be retained. All others must be made available as needed for the service of the nation in the armed forces.

The Procurement and Assignment Service for Physicians, Dentists and Veterinarians was established to aid in the proper assignment of physicians in times like these to the tasks for which they are best fitted. Already this agency has been of immense value in the principles that have been adopted relative to the maintenance of medical education, hospital service and civilian health, as well as the study and evaluation of men for the Army and Navy medical departments. As the needs become more acute and the number of men available less, their task assumes increasing importance. The War Manpower Commission is now the agency under which the Procurement and Assignment Service functions. Through the activities of various subcommittees such problems as maintenance of essential staff members for hospitals, the determination of adequate medical service for the civilian population needs, of adequate personnel for urban, county, state and national health departments and the needs of industry are being given special consideration. The medical profession, as Mr. McNutt has repeatedly emphasized, has in these activities shown the way to scientific study and allocation of manpower in this emergency.

EMERGENCY MEDICAL SERVICE

Dr. Gilbert Osincup, president of the Florida Medical Association, who has been chairman of the Division of Health and Housing of the Florida State Defense Council since its inception, has been appointed Chief of the Emergency Medical Service for the State of Florida, as a reserve officer in the United States Public Health Service, assigned to the O. C. D.

The duties of this office consist in organizing emergency medical care in all its phases. These include care of persons who may be injured as a result of enemy action or sabotage, protection of the health and welfare of the citizens of the state, and the providing of adequate medical care for civilians. In order to carry out the duties of this office, Dr. Osincup has given up the private practice of medicine for the period of the emergency.

Due to the large number of doctors who are joining the armed services, there is a shortage of physicians in some communities in Florida. This shortage is going to grow progressively worse as more and more doctors are taken out of practice. In order to build up a pool of physicians who might be willing to leave their home communities and practice medicine in places where the need is great, either on a full time governmental basis,

part time, or in the private practice of medicine, we would appreciate an expression from such men of their willingness to serve in this capacity. If you feel you would be useful in this field of medical defense, and are not essential to the proper care of citizens in your community, please write Dr. Osincup, Box 3231, Orlando, giving details as to age, type of practice you can do, and any other pertinent information.

DR. HANSON AGAIN NAMED STATE HEALTH OFFICER

Dr. Henry Hanson has been appointed state health officer for Florida, effective July 15. The appointment was made by Governor Spessard L. Holland after he conferred with the officers of the Florida Medical Association and studied the qualifications of Dr. Hanson and other physicians who were available for this post.

In December 1909 Dr. Hanson was called to take charge of the State Board of Health Laboratory in Jacksonville, and continued as bacteriologist until May 1916. In May 1927 he rejoined the State Board of Health as district health officer but the following month he became director of sanitation of the Jacksonville City Board of Health. On September 15, 1929, Dr. Hanson was appointed state health officer and served in that capacity until December 1935.

At intervals between his association with the State Board of Health he traveled extensively in South America for the Rockefeller Foundation, the Pan American Sanitary Bureau and the United States Public Health Service, and he is a specialist in tropical diseases. His many friends in Florida will rejoice to learn that he is again the state health officer, a post for which he is exceptionally well qualified.

The members of the State Board of Health are Dr. Herbert L. Bryans, Pensacola, president, Dr. Robert B. McIver, Jacksonville, and Mr. William Parr, Tampa.

SCIENTIFIC PROGRAM, 1943

Have you conducted original research or experimental work? Do you wish to report your findings to the State Convention in April, 1943? If so, make application at once for a place on the program to Dr. Herbert E. White, Chairman of the Committee on Scientific Work, Box 1018, Jacksonville. Dr. White has announced that no general letter calling for papers will be mailed to the member hip this year.

A. M. A. MEETING

The 93rd annual convention of the American Medical Association, held in Atlantic City, was well attended; 8,238 physicians registered, which exceeded all expectations. Gasoline rationing on the Eastern Seaboard, it seemed, might interfere seriously with the annual session, but fortunately the interest among the members of the profession was so great that physicians poured in by every possible means of conveyance. There was an unusually large attendance from Latin America; 140 physicians registered from other American nations.

The Florida Medical Association was officially represented in the House of Delegates by Drs. Edward Jelks of Jacksonville and Meredith Mallory of Orlando. The following 67 members of our Association registered at the national meeting:

Bay Pines: Francis J. Mantell. *Crestview*: R. E. Enzor. *Daytona Beach*: Richard Reeser, Jr., Morris B. Seltzer. *Ft. Lauderdale*: Russell B. Carson. *Fort Myers*: William H. Grace. *Gainesville*: J. Maxey Dell, Jr. *Jacksonville*: Edward Jelks, Louie Limbaugh, W. McL. Shaw. *Maitland*: Eugene L. Jewett. *Miami*: I. H. Agos, Nelson M. Black, Herbert Eichert, Tom R. Gammage, J. Raymond Graves, Winston F. Harrison, Carlos P. Lamar, Claude G. Mentzer, E. Sterling Nichol, William T. H. Pallister, Bascom H. Palmer, Max Pepper, C. Larimore Perry, Gerard Raap, Wiley M. Sams, Ralph S. Sappenfield, E. Clay Shaw, John W. Snyder, Robert T. Spicer, William H. Watters, Paul B. Welch.

Miami Beach: Milton G. Bohrod, Max Dobrin, Elias Friedus, Ralph A. Gowdy, Maurice A. Kugel, Cayetano Panettiere, Jean J. Perdue, Virgil H. Pieck, Murray M. Reckson, C. Frederic Roche, M. Jandon Schwarz, M. Paul Travers, G. H. Withers. *Ocala*: John N. Moore. *Orlando*: Meredith Mallory. *Palm Beach*: Bailey B. Sory. *Panama City*: John P. Adams. *Pensacola*: William S. Randall, Herbert W. Virgin. *St. Augustine*: Vernon A. Lockwood. *St. Petersburg*: James A. Bradley, O. O. Feaster, Charles E. Hebard, Roscoe H. Knowlton, Robert J. Needles, Carl A. Williams. *Sarasota*: John M. Butcher, Joseph Halton. *Sebring*: Leldon W. Martin. *Tampa*: Joshua C. Dickinson, R. R. Duke, E. S. Gilmer, A. L. Stone. *West Palm Beach*: W. W. George. *Winter Park*: Ruth S. Hart.

BIRTHS

Dr. and Mrs. Ernest Bostelman of Fort Myers announce the birth of a son, Ernest, Jr., on May 13.

Dr. and Mrs. Aaron Z. Oberdorfer of Jacksonville announce the birth of a son on June 19.

Dr. and Mrs. Frank M. Woods of Jacksonville announce the birth of a daughter on June 19.

Dr. and Mrs. F. G. King of Jacksonville announce the birth of a daughter on July 4.

Dr. and Mrs. Thomas F. Nelson of Jacksonville announce the birth of a son, Thomas Finn, Jr., on June 26.

STATE NEWS ITEMS

The American Congress of Physical Therapy will hold its twenty-first annual scientific and clinical session September 9-12, 1942, at the Hotel William Penn, Pittsburgh, Pa. For additional information, address the Congress, 30 North Michigan Avenue, Chicago, Ill.

Dr. Henry C. Dozier of Oklawaha, past president of the State Medical Association, on request of the Ocala *Banner,* has agreed to write a regular column each week. Dr. Dozier's colleagues will be interested in this new activity.

Dr. Theodore F. Hahn of DeLand gave an interesting talk on "Chemistry in Medicine and its Progress" at the weekly Rotary Club luncheon recently.

Dr. H. Marshall Taylor of Jacksonville was elected president-elect of the American Laryngological, Rhinological and Otological Society at the meeting held in Atlantic City the early part of June. The other Florida doctors attending this meeting were: S. B. Forbes, Tampa, and W. T. Hotchkiss, Miami Beach.

Doctors from Florida who attended the meeting of the American College of Radiology, held in Atlantic City, June 10, were: J. C. Dickinson, Tampa; O. O. Feaster, St. Petersburg; John N. Moore, Ocala; Gerard Raap, Miami, and W. McL. Shaw, Jacksonville.

Dr. Nelson M. Black of Miami and Dr. Shaler Richardson of Jacksonville attended the annual meeting of the American Ophthalmological Society, held at Hot Springs, Va., in June.

Doctors from Florida in attendance at the meeting of the American Heart Association in Atlantic City, June 5 and 6, were: Louie Limbaugh, Jacksonville; Max Pepper, Miami; William H. Bernstein, M. A. Kugel and C. F. Roche, Miami Beach; James A. Bradley, St. Petersburg, and Joseph Halton, Sarasota.

At the meeting of the American Diabetes Association, held in Atlantic City June 7, the following Florida doctors were in attendance: James A. Bradley and R. J. Needles of St. Petersburg and Carlos P. Lamar of Miami.

Dr. Fred W. Rankin, Lexington, Ky., retired as a member of the Medical Advisory Board of the Office of Civilian Defense upon being called to active service in the Office of the Surgeon General of the Army. Dr. John T. O'Rourke, dean of the University of Louisville School of Dentistry, Louisville, Ky., has been designated to fill the vacancy on the Board.

Dr. J. N. Moore of Ocala was granted a Fellowship in the American College of Radiology at the Atlantic City meeting in June.

The Florida Board of Examiners in the Basic Sciences will hold its next examination October 31, 1942, at the University of Florida, Gainesville. The Florida law requires that all applications be made at least fifteen days prior to the date of the examination. All requests for application blanks should be sent to Dr. John F. Conn, secretary, Stetson University, DeLand, Florida.

Members of the State Association who wish to read papers at one of the scientific sessions of the annual convention to be held in St. Petersburg, April 12, 13 and 14, 1943, are urged to file applications at once with Dr. Herbert E. White, chairman of the Committee on Scientific Work. Dr. White has announced that no general letter calling for applications will be mailed to the entire membership of the Association. All applications should be addressed to Dr. Herbert E. White, Box 1018, Jacksonville.

Dr. Wilson Lancaster of Kissimmee is taking special work in surgery at the Harvard University Postgraduate School.

JOHN LEE SUMMERLIN

Dr. J. Lee Summerlin of Gainesville, who for the last seventeen years has been one of Alachua County's leading eye, ear, nose and throat specialists, died on the evening of May 31 at his summer home on Lake Santa Fe.

Dr. Summerlin was born February 16, 1889, in Adel, Ga., the son of Mr. and Mrs. Perry Summerlin. He received his medical training at Emory University School of Medicine, from which he was graduated in 1916. He practiced in Georgia until in 1925 when he moved to Gainesville.

At the time of his death, Dr. Summerlin was president of the Alachua County Medical Society, a member of the Florida Medical Association, the American Medical Association, the Kiwanis Club, the Masonic Lodge, president of the Gainesville Golf Association, and a member of the First Methodist Church.

He is survived by his widow, Mrs. Myrtle Summerlin; two sons, Glenn and Winston, students of medicine at the University of Maryland; a brother, Dr. Maxey Summerlin of Athens, Ga., and a sister, Mrs. Martha LaGrange of Ocala.

The following resolution of sympathy was recently adopted by Dr. Summerlin's colleagues, the members of the Alachua County Medical Society:

Man stands with humble spirit and heart beats that are barely perceptible in the presence of the death of one with whom they were so closely associated in every day life. He gropes and strives to make articulate his desire to comfort and assist his colleagues who are so deeply grieved that he has been summoned to make his future home with the Supreme Physician.

We are not selfish in our grief; we desire to not only share our grief with his devoted wife and sons, but by our actions and words, comfort them in the hours of loneliness. So, we the members of the Alachua County Medical Society join with the members of our profession throughout the nation, and particularly with those of the state of Florida, pause and extend a word of simple but sincere sympathy to the bereaved family.

The loss they have suffered is keenly felt, just as it understood the fineness of Lee Summerlin, for he was one to be truly loved; the husband of a fine and noble woman and the father of two sons who have proved that the influence of their devoted father was a dominating factor in the exemplary lives they are living.

Therefore, Be It Resolved that the members convey these words of sympathy to the family of Dr. J. Lee Summerlin, that a copy of this resolution be sent to the newspaper and that a page of the minute book of the Alachua County Medical Society be used for inscribing these resolutions.

D. T. Smith
John E. Maines, Jr.
J. Maxey Dell
Committee

COMPONENT COUNTY SOCIETIES

DADE

The Dade County Medical Society held its June meeting on the evening of the 2nd, at the Jackson Memorial Hospital. The meeting was devoted to a discussion of business matters.

DE SOTO-HARDEE-HIGHLANDS-CHARLOTTE-GLADES

The regular monthly meeting of the DeSoto-Hardee-Highlands-Charlotte-Glades County Medical Society was held June 16 at the Simmons Hotel, Wauchula, where a fried chicken dinner was enjoyed.

Attending the meeting were: Drs. G. H. McSwain and H. P. Bevis of Arcadia, Dr. I. W. Chandler of Avon Park, Dr. H. V. Weems of Sebring, Dr. Paul Bird of Tampa, Drs. M. C. Kayton, B. D. Spears and M. A. Collier of Wauchula.

DUVAL

The Duval County Medical Society met on the evening of June 2 at the Friday Musicale Auditorium. Drs. Sidney Halpern and L. Y. Dyrenforth presented a paper on "Leprosy; a Consideration in Secondary Changes of the Hand." A business meeting followed the scientific discussion, after which refreshments were served.

PINELLAS

On June 5 the Pinellas County Medical Society held a dinner meeting at the Shrine Club. The program consisted of two discussions: "Bronchoesophagoscopy" by Dr. M. O. McNay, and "Procurement and Assignment" by Dr. W. M. Davis.

The second meeting of the Society was held on the evening of June 19 in the office of Drs. Feaster, when a round-table discussion of topics of interest was held. Dr. O. O. Feaster acted as moderator.

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GYNECOLOGY—Two Weeks Intensive Course will be offered starting October 5th. One Month Personal Course starting August 3rd. Clinical and Diagnostic Courses every week.

OBSTETRICS—Two Weeks Intensive Course will be offered starting September 21st. Three Weeks Course starting August 10th. Informal Course every week.

OTOLARYNGOLOGY—Two Weeks Intensive Course will be offered starting September 14th. Clinical and Special Courses every week.

OPHTHALMOLOGY—Two Weeks Course will be offered starting September 28th. Five Weeks Course in Refraction Methods starting October 19th. Informal Course every week.

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ABSTRACT DEPARTMENT

Members of the Florida Medical Association who have had articles published in out-of-state medical journals are requested to forward such journals or reprints to Box 1018, Jacksonville, for abstracting in this department.

NONHEMOLYTIC FAMILIAL JAUNDICE, CARITHERS, HUGH A., JR., JACKSONVILLE, J. PEDIAT. **19**:817-822 (DEC.) 1941.

The author reviews the pertinent literature on nonhemolytic familial jaundice and cites an interesting case in point, the "M" family. He relates in detail the history of the hospital admissions of two members of this family and states that this is the first report of such a case in pediatric literature.

In his discussion he directs attention to the investigations of Dameshek and Singer, and suggests that their observations would indicate that inheritance of this condition is probable. He also refers to the work of Malloy and Lowenstein who described a strain of rats which have hereditary jaundice.

The author concludes that in the cases he reports the two children had nonhemolytic familial jaundice because:

1. Jaundice was constantly present.
2. It was pronounced and could not be classified as latent.
3. The children nevertheless grew well and remained in good health.
4. Their spleens were never palpable.
5. There was no anemia, and reticulocytosis occurred at a normal rate.
6. There was no spherocytosis nor was there bilirubin or urobilinogen in the urine.

In a chart he presents the differentiation between nonhemolytic and hemolytic jaundice, with special reference to the two cases cited.

SUBCUTANEOUS IMPLANTATION OF TESTOSTERONE IN MALE EUNUCHOIDISM, LAMAR, CARLOS P., MIAMI, CLIN. MED. **49**:66-68 (MAR.) 1942.

The author reports a case of hypogonadism in a man of the eunuchoid type treated by means of implantation of testosterone pellets. The response to treatment by implantation seems to be earlier, more sure and more prolonged than by injection methods. The author reports the adoption of intramuscular rather than subcutaneous implantation in order to avoid loss of the testosterone by sloughing and breaking down of the wound. The results reported are significant and the illustrations valuable.

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ATYPICAL SYMPTOMATOLOGY IN CHRONIC NEPHRITIS, NEEDLES, ROBERT J., ST. PETERSBURG, UROL. & CUTAN. REV. **46**:95-99 (FEB.) 1942.

By means of two detailed and well presented case reports the author directs attention to the fact that often the first symptoms in chronic nephritis are those suggesting gastrointestinal disease. Instead of the early uremic symptoms of headache, vertigo, swelling of the face, hands or feet, pallor, anorexia, nocturia, polyuria, epistaxis and shortness of breath, the first symptoms may be those of gastric dysfunction even to the point where malignant disease of the gastrointestinal tract is considered in the diagnosis.

In this clinical report the discussion of the possible mechanisms involved brings to mind the earlier reports of another Florida physician who interested himself in the relationship between gastrointestinal symptoms and pathologic changes of the urogenital tract, the work done by Welch some years ago with dogs. By means of inflatable balloons in the gut, he measured reflex changes in the intestines as various lesions of the kidneys and ureters were produced.

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BOOKS RECEIVED

Acknowledgment of books received will be made in this column and this will be deemed by us a full compensation to those sending them. A selection will be made for review as expedient.

SURGERY OF THE AMBULATORY PATIENT. By L. Kraeer Ferguson, A.B., M.D., F.A.C.S., Lieut. Commander, Medical Corps, U. S. Naval Reserve; Assistant Professor of Surgery, University of Pennsylvania, Philadelphia. With a Section on Fractures by Louis Kaplan, A.B., M.D., F.A.C.S., Associate in Surgery, University of Pennsylvania, Philadelphia. An experience of some years in treating the surgical lesions which occur in ambulatory patients has indicated the need for a text devoted to this branch of surgery. Surgery of the ambulatory patient is the surgery performed more often by the young physician and the general practitioner. Fabrikoid. Price, $10. Pp. 923, with 645 illustrations. Philadelphia, London, Montreal: J. B. Lippincott Company, 1942.

METHODS OF TREATMENT IN POSTENCEPHALITIC PARKINSONISM. By Henry D. von Witzleben, Elgin State Hospital, Elgin, Ill. Dr. von Witzleben's monograph is another contribution to our knowledge and a progressive step in the control of postencephalitic Parkinsonism. Cloth. Price $2.75. Pp. 164. New York: Grune and Stratton, Inc., 1942.

BODY MECHANICS IN HEALTH AND DISEASE. Third Edition, Completely Revised. By Joel E. Goldthwait, M. D., F. A. C. S., LL. D., Member of Board of Consultants, Massachusetts General Hospital, Boston; Lloyd T. Brown, M. D., F. A. C. S., Instructor in Orthopedics, Harvard Medical School; Loring T. Swaim, M. D., Instructor, Orthopedic Surgery, Harvard Medical School and John G. Kuhns, M. D., F. A. C. S., Assistant in Orthopedic Surgery, Harvard Medical School, Cambridge. With a Chapter on the Heart and Circulation as Related to Body Mechanics by William J. Kerr, M. D., F. A. C. P., Professor of Medicine, University of California School of Medicine, San Francisco. Cloth. Price, $5. Pp. 316, with 121 illustrations. Philadelphia, London, Montreal: J. B. Lippincott Company, 1941.

CHRONIC ARTHRITIS. By Karl Goldhamer, M. D., Associate Roentgenologist, St. Mary's Hospital and Quincy X-Ray and Radium Laboratories, Quincy, Ill. X-ray therapy of chronic arthritis. Cloth. Price, $2. Pp. 131, with 24 illustrations. Quincy, Ill.: Radiologic Review Publishing Company, 1941.

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**Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154. Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60*

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DUVAL COUNTY AUXILIARY

The Woman's Auxiliary to the Duval County Medical Society held its annual meeting in the home of Mrs. Lucien Dyrenforth on St. Johns Avenue.

Officers and chairmen of standing committees gave interesting reports of their work during the year. The president's report summarized the various activities of the auxiliary for the past year: the defense committee's first aid class and blanket drive, the generous donations to the Red Cross of money and layettes, the booths maintained for Christmas seals and cancer control drives, the samples gathered for the Colored Tuberculosis Hospital, the subscriptions obtained for Hygeia magazine, the health talks in various rural schools and the making of sandwiches every month for the Medical Society meetings.

The chairman of the nominating committee, Mrs. Victor Hughes, read her report and the following officers were elected for the coming year: President, Mrs. Raymond King, re-elected; vice president, Mrs. Ernest Veal; secretary, Mrs. Leo Wachtel, and treasurer, Mrs. W. H. McCullagh, re-elected.

Mrs. King introduced the speaker for the afternoon, Otis Owens of the Treasury Department, United States Secret Service. Mr. Owens showed a talking movie, "Know Your Money," sponsored by the Government in cooperation with the police department in a drive against the passing of counterfeit money.

Delicious refreshments were served from a beautifully appointed table, centered with an artistic arrangement of fruit and vegetables. Mrs. S. R. Norris presided at the punch bowl, assisted by Mrs. F. W. Krueger, Mrs. Victor Hughes and Mrs. E. W. Veal.



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STATE AND SECTIONAL MEETINGS

SOCIETY	PRESIDENT	SECRETARY	ANNUAL MEETING
rida Medical Association	Gilbert S. Osincup, Orlando	Shaler Richardson, Jacksonville	St. Petersburg, Apr. 12-14, 1943
rida Medical Districts:			
\—Northwest	Courtland D. Whitaker, Marianna	Stewart Thompson, Jacksonville	Tallahassee, Oct. 8, 1942
3—Northeast	L. Y. Dyrenforth, Jacksonville	" " "	Ocala, Oct. 15, 1942
C—Southwest	Edgar Watson, Lakeland	" " "	Sarasota, Oct. 22, 1942
)—Southeast	Lloyd J. Netto, W. Palm Beach	" " "	Miami, Oct. 29, 1942
bama Medical Association		D. L. Cannon, Montgomery	Birmingham, Apr. 20-22, 1943
rgia, Medical Assn. of	H. B. Searcy, Tuscaloosa	E. D. Shanks, Atlanta	Atlanta, May 11-14, 1943
rida—	James A. Redfearn, Albany		
ection, Am. College Phys.	R. H. Knowlton, St. Petersburg	Kenneth Phillips, Miami	St. Petersburg, Apr. 11-12, 1943
Dental Society, State	I. W. Shields, Miami	W. P. Wood, Jr., Tampa	Tampa
Derm. and Syph., Soc. of	Wiley M. Sams, Miami	Lauren M. Sompayrac, Jacksonville	Jacksonville, July 12, 1942
East Coast Medical Association	T. C. Kenaston, Cocoa	I. M. Hay, Melbourne	Melbourne, 1942
Hospital Association	Mr. Ernest G. McKay, Tampa	Mr. R. L. Martin, St. Petersburg	Tampa, June 13, 1942
ndustrial Surgeons, Assn. of	Frank D. Gray, Orlando	Richard H. Walker, Orlando	St. Petersburg, Apr. 11-12, 1943
Medical Postgraduate Course	Turner Z. Cason, Jacksonville	Chairman	Jacksonville, June 22-27, 1942
Nurses Association, State	Mrs. M. Stetson, St. Petersburg	Mrs. Phyllis Leonard, St. Augustine	Orlando, November, 1942
Ophthal. & Otol., Soc. of	Shaler Richardson, Jacksonville	C. E. Dunaway, Miami	St. Petersburg, Apr. 11-12, 1943
Pathological Society	L. Y. Dyrenforth, Jacksonville	Iva C. Youmans, Miami	St. Petersburg, Apr. 11-12, 1943
Pediatric Society	Warren W. Quillian, Coral Gables	G. N. Leonard, Miami Beach	St. Petersburg, Apr. 11-12, 1943
Pharmaceutical Association, State	Mr. Emmett L. Brown, Palatka	Mr. R. Q. Richards, Ft. Myers	Tallahassee, May 19-21, 1942
Public Health Association	W. H. Pickett, Jacksonville	Lloyd N. Harlow, Jacksonville	Miami, Fall, 1942
Radiological Society	John N. Moore, Ocala	Walter A. Weed, Orlando	St. Petersburg, Apr. 11-12, 1943
Railway Surgeons' Association	Frank D. Gray, Orlando	W. C. Page, Cocoa	St. Petersburg, Apr. 11-12, 1943
Tuberculosis & Health Assn.	Mr. E. M. Newald, Orlando	Mrs. C. R. Whitaker, Eustis	Tampa, May 18-19, 1942
attahoochee Valley Med. Assn.	Herbert E. White, St. Augustine	Robert B. McIver, Jacksonville	Postponed
ulf Coast Clinical Society	G. G. Oswalt, Mobile, Ala.	C. L. Rutherford, Mobile, Ala.	Mobile, 1942
E. Sec., Am. Cong. Phys. Ther.	John J. McGuire, Pensacola	Kenneth Phillips, Miami	
utheastern Surgical Congress	Alton Ochsner, New Orleans	B. T. Beasley, Atlanta	Louisville, Mar. 8-10, 1943
uthern Medical Association	M. Pinson Neal, Columbia, Mo.	Mr. C. P. Loranz, Birmingham	Richmond, November, 1942
wannee River Medical Society	L. J. Arnold, Jr., Lake City	T. H. Bates, Lake City	Lake City, Dec. 1942

COMPONENT SOCIETIES BY DISTRICTS

	SOCIETY	PRESIDENT	SECRETARY	MEETING DATE	MEMBERS Total	MEMBERS Paid	COUNCILOR
A	Bay	M. F. Parker, M.D. Panama City	J. O. Barfield, M.D. County Health Unit Panama City		10	9	
	Escambia *Santa Rosa	A. L. Stebbins, M.D. State Bd. of Health Pensacola	William S. Randall, M.D. 1419 E. Cervantes St. Pensacola	2nd Tuesday 8:00 P.M.	52	51	A-1-43 C. D. Whitaker, M.D. Marianna
	Franklin-Gulf	Thos. Meriwether, M.D. Wewahitchka	J. R. Norton, M.D. Port St. Joe	3rd Tuesday Odd Months	5	4	
	Jackson *Calhoun	W. R. Wandeck, M.D. Marianna	R. N. Joyner, M.D. Marianna	2nd Tuesday 7:30 P.M.	12	100%	
	Walton-Okaloosa	A. G. Williams, M.D. Lakewood	R. B. Spires, M.D. DeFuniak Springs	3rd Thursday 8:00 P.M.	6	100%	
	Washington-Holmes	N. J. Dawkins, M.D. Vernon	B. W. Dalton, M.D. Vernon		6	100%	
	Columbia *Baker, Hamilton	Harry S. Howell, M.D. Blanche Hotel Annex Lake City	Thomas H. Bates, M.D. Blanche Hotel Annex Lake City	1st Monday 7:30 P.M.	11	100%	A-2-44 William D. Rogers, M.D. Chattahoochee
	Leon-Gadsden-Liberty-Wakulla-Jefferson	G. H. Garmany, M.D. Tallahassee	B. A. Wilkinson, M.D. Telephone Bldg. Tallahassee	Quarterly 3:00 P.M.	40	36	
	Madison-Suwannee	Eustace Long, M.D. Madison	E. D. Thorpe, M.D. Madison		8	100%	
	Taylor *Dixie, Lafayette	J. C. Ellis, M.D. Perry	Chas. A. O'Quinn, M.D. Perry	Last Friday 8:00 P.M.	5	100%	
B	Alachua *Bradford, Gilchrist, Union	R. E. Summitt, M.D. 122 No. Pleasant St. Gainesville	A. T. Cobb, M.D. 331 W. University Ave. Gainesville	2nd Wednesday 7:30 P.M.	29	21	B-3-43 L. Y. Dyrenforth, M.D. Jacksonville
	Duval *Clay, Nassau	Ernest B. Milam, M.D. 508 Greenleaf Bldg. Jacksonville	Frank G. Slaughter, M.D. 2033 Riverside Ave. Jacksonville	1st Tuesday 8:15 P.M.	192	100%	
	Marion *Levy	B. S. Stutts, M.D. Anderson Bldg. Dunnellon	T. Hartley Davis, M.D. 202 Commercial Bank Ocala	3rd Thursday 12:30 P.M.	29	28	
	Putnam	J. Worth Brantley, M.D. Grandin	C. M. Knight, M.D. Palatka	2nd Tuesday Even Months 7:00 P.M.	10	9	
	St. Johns	W. D. Webb, M.D. 220 St. George St. St. Augustine	Charles C. Grace, M.D. East Coast Hospital St. Augustine	3rd Tuesday 8:30 P.M.	12	100%	
	Brevard	G. T. von Colditz, M.D. Route 1 Cocoa	I. K. Hicks, M.D. Melbourne	3rd Wednesday	11	10	B-4-44 Meredith Mallory, M.D. Orlando
	Lake *Sumter	Louis R. Bowen, M.D. Box 905 Eustis	R. H. Williams, M.D. State Theater Bldg. Eustis	1st Thursday 12:30 P.M.	20	17	
	Orange *Osceola	Spencer A. Folsom, M.D. 319 Exchange Bldg. Orlando	E. E. Hitchcock, M.D. 7 E. Colonial Dr. Orlando	3rd Wednesday 8:30 P.M.	89	80	
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C	Hillsborough	B. W. Lowry, M.D. 1019 Citizens Bk. Bldg. Tampa	James S. Grable, M.D. 811 Citizens Bk. Bldg. Tampa	1st Tuesday 8:00 P.M.	105	97	C-5-44 Leland F. Carlton, M.D. Tampa
	Manatee	L. W. Blake, M.D. Bradenton	M. M. Harrison, M.D. Professional Bldg. Bradenton	3rd Tuesday 7:00 P.M.	14	100%	
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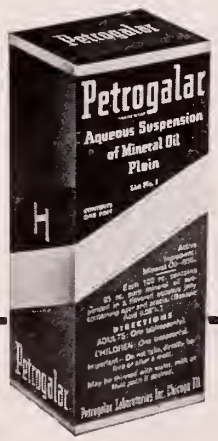
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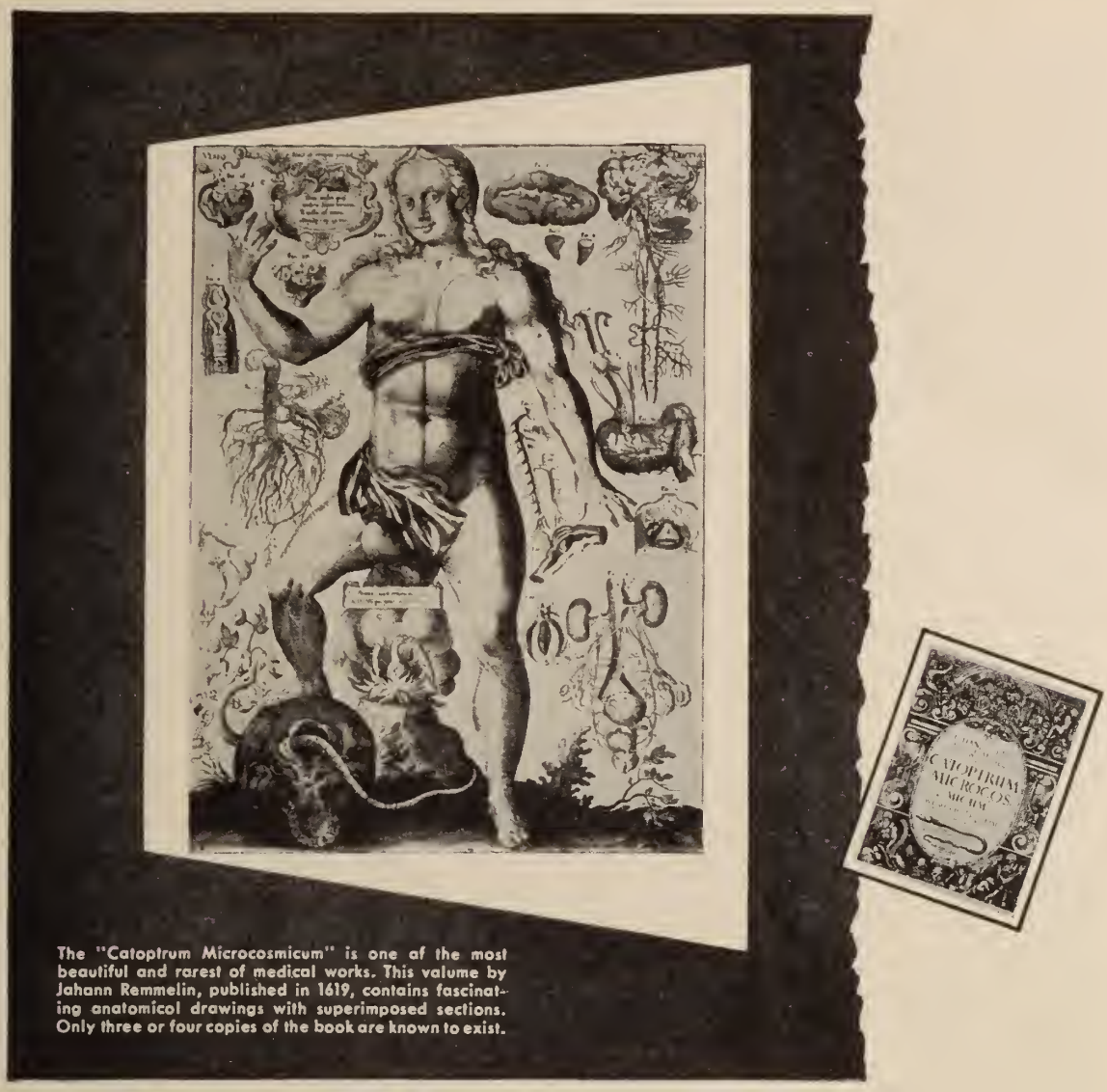
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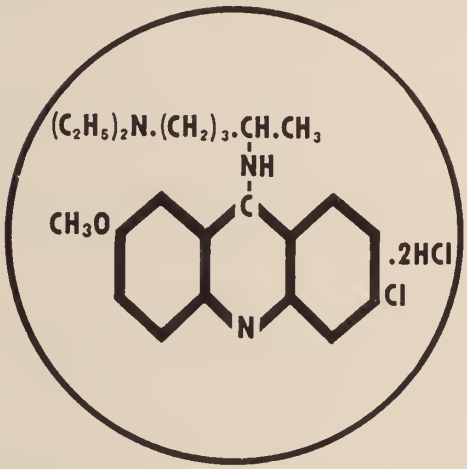
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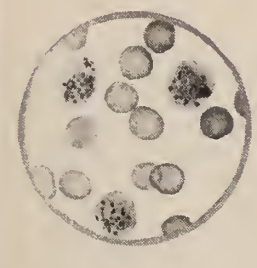
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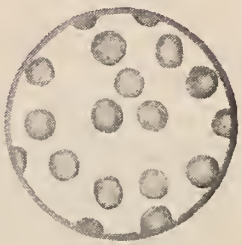
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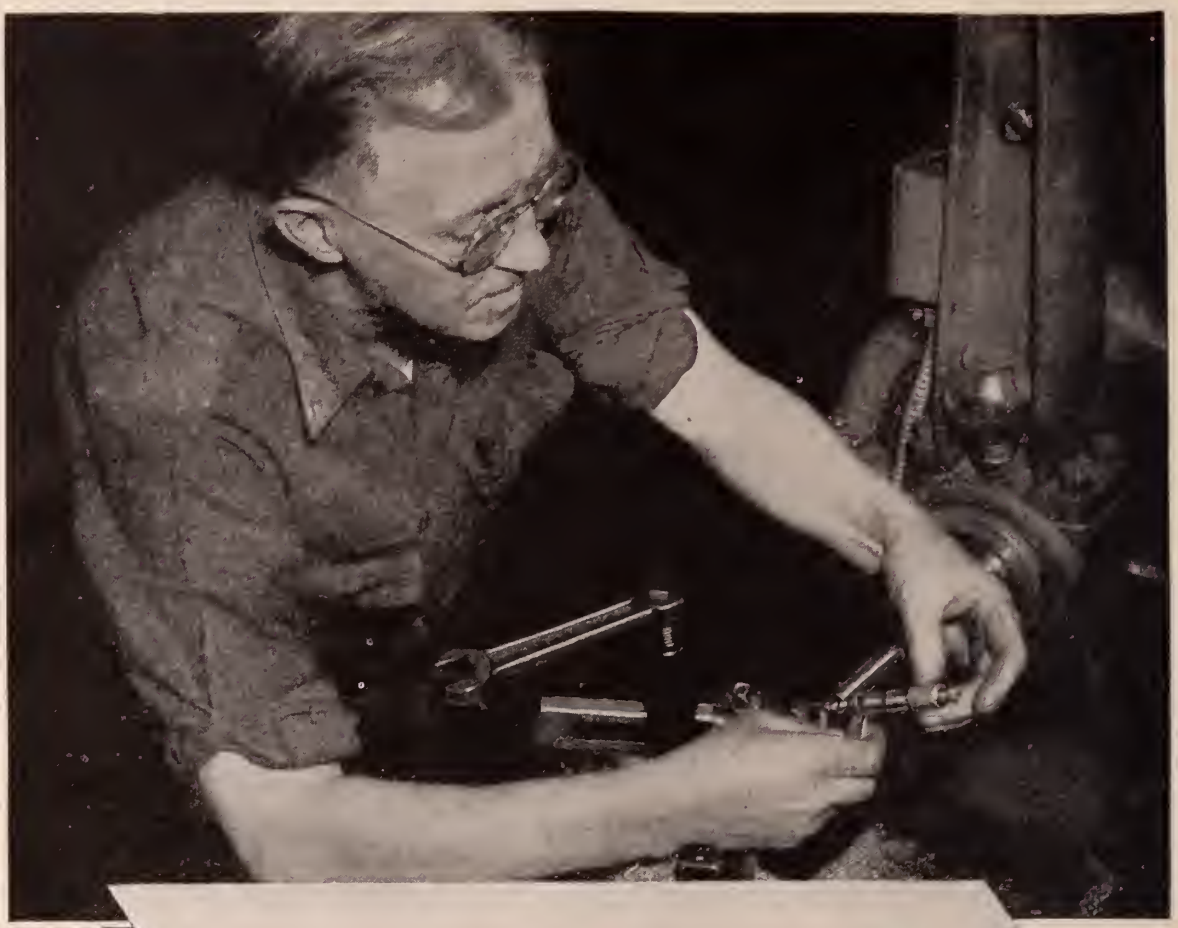
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A DERMATOLOGIST IN THE NAVY

LAUREN M. SOMPAYRAC
LIEUTENANT M.C.V-(S) USNR
JACKSONVILLE

Scientific dermatology began on Nov. 27, 1801, when the old Hospital Saint Louis in Paris was officially dedicated to the treatment of cutaneous diseases. American dermatology may be said to have begun in New York on June 22, 1836, when the Broome Street Infirmary for Diseases of the Skin was opened under the direction of Henry Dagett Bulkley.

No longer a specialty of descriptive words with a confused superficiality, dermatology has become cutaneous medicine founded on a firm scientific basis. Fortunately, this specialty has had great leaders who have commanded the respect of the entire medical world. This branch of medicine has been given professorships in practically all of the medical colleges. It has an independent department, often the largest from the point of view of floor space and attendance, in the leading hospitals. There are a number of hospitals completely self contained in all allied branches devoted entirely to dermatology.

The United States Navy also has come to recognize dermatology as a field of medicine that can be used to advantage. Since the opening of the Jacksonville Naval Hospital in July, 1941, this specialty has enjoyed an active service there. Located on the banks of the beautiful St. Johns River, this hospital renders service to the Naval Air Station and other naval activities.

The cooperation of the medical personnel with the dermatologist has been most gratifying. All have shown a willingness to release the cases requiring his services. No regular skin clinic is held. The hospital maintains, however, a full time outpatient department through which, when it is deemed necessary, cases are referred to the dermatologist. Records show that for the first quarter of the fiscal year there was an average of 67 patients a month who were referred through this channel. This number has steadily increased with the rapid growth of the station.

The admissions to the dermatology service for the first eight months of the hospital's existence were over 13 per cent of the total admissions. These cases included all of the common skin diseases in stages rendering the service man temporarily unfit for duty.

Unusual cases have also been encountered. One of the most interesting was a case of bullous erythema multiforme involving all mucous membranes, in which the disease at its height rendered the patient toxic enough to bring up the dreaded thought of a possible acute pemphigus. In this case sulfonamides failed to be of value in treatment. The patient was given a diet high in calories, and recovery was satisfactory following treatment with arsenic and good nursing care. Although the cause of this eruption was not determined, two similar but milder eruptions were traceable to the yellow fever vaccine. Sulzberger, dermatologist of the Naval Hospital at Brooklyn Navy Yard, observed similar reactions to this product.

Much more of a problem are the common skin diseases, which account for the loss of many man hours. Of these, fungus infection leads the field, causing 30 per cent of the total dermatologic cases. Unfortunately, no practical method of prevention of this disease has yet been found. The Jacksonville Naval Station spends $70 a month on sodium hypochlorite and similar preventives and keeps one man constantly renewing the solution in the vats in all showers in the barracks and the pools. The men are encouraged to use these facilities, but in spite of this precaution the pathogenic fungi enjoy a widespread existence on our naval forces.

Not only are preventive measures inadequate, but treatment is likewise unsatisfactory. There has as yet been no quick cure for athlete's foot ("spic itch") despite the multitude of advertisements to the contrary. Most of the patients know about a so-called sure cure, and I regret to say that many doctors have their pet "quick remedies," too. Yet it is from the group of patients treated by these enthusiasts that most hospital cases arise. Almost all patients admitted to the ward are overtreated. Or, perhaps the treatment is just not compatible with a duty status. At any rate, it is hoped that constant pleading for milder medication and encouragement in the use of talcum powder daily may lower the number of days lost because of this condition.

Despite the traditional cleanliness in the Navy, the animal parasites account for considerable

Read before the Sixty-Ninth Annual Meeting of the Florida Medical Association, held in Hollywood, Apr. 13, 14 and 15, 1942.

loss of time. The annual report of the Surgeon General of the United States Navy for 1939 showed that the common itch mite accounted for 4,729 sick days. No epidemics have occurred but there has been a little over one case for each week the Jacksonville Naval Hospital has been in operation. Early isolation and thoroughness of treatment are important here as well as in other parasitic infestations. A mild epidemic of rubella has recently taxed the isolation facilities of the hospital.

Impetigo contagiosa and staphylococcus infections of the skin have accounted for a good portion of the sick days in the hospital. The sulfonamides have been more helpful in impetigo contagiosa than in other diseases of this group. They have proved especially disappointing when administered both locally and internally in the treatment of sycosis vulgaris. Patients with carbuncles are given roentgen therapy and sulfonamides on admission with excellent results. Radical surgery has not been necessary.

Even acne vulgaris has caused such abscesses that hospitalization was deemed advisable. A diet low in fats and thyroid therapy, frequently helpful in mild cases, do not seem to be of value in the far advanced cases. Local treatment including ultraviolet and roentgen therapy, was often resorted to in order to hasten the patient's return to duty. No attempt is made to run a a beauty clinic, nor do the men wish to take time out for any nonessential attention. It has been of interest to note the similarity of some of the cases of acne to the lack of response of the metabolic rate in schizophrenics following the administration of thyroid. It is only an observation made in too few cases to warrant the drawing of a definite conclusion. The psychiatric department has become interested in this also.

Industrial dermatitis is a problem arising out of the main station. It is fortunate indeed that Dr. Hubert Coleman, the industrial physician, has been assigned to this area. On numerous occasions we have had opportunities to exchange ideas as to diagnosis, treatment and prevention of some of the occupational dermatoses encountered. Most of the cases have arisen from the assembly and repair department. This department embraces all of the various functions and includes all the hazards incident to the construction, repair and upkeep of aviation. Under one huge roof men are engaged in cleaning, repairing and rebuilding planes. At the vats where men are cleaning motors, using solvents containing chlorinated hydrocarbons, creosote and kerosene, cases of dermatitis are observed that vary from almost imperceptible erythemas to full blown weeping eczematous dermatitides. The only men who seem to be able to withstand the irritation are the dark-skinned negroes. Mulattoes and whites must give up the work, or be transferred to other phases of the cleaning after a few days. Most of the trouble arises where the machinery is cleaned in vats with hand brushes. Rubber gloves have been tried without success. Cleansing with soap and water before and after work followed by an application of lanolin and castor oil may prove of value, although sufficient time has not elapsed to evaluate this procedure. Some of the parts of the planes are cleaned by trichlorethylene vapor, which is kept low in the vats by a cooling system. Here only an occasional irritation is encountered in the operators. Adjustment of ventilation has greatly reduced primary skin irritations due to vapors. Some problems of skin irritation arise in the painting or doping department. A vanishing cream used before and after work has done much to control this trouble.

In the hospital physiotherapy and superficial roentgen therapy have been delegated to the dermatologist. This arrangement has worked out satisfactorily. Infra-red lamps, diathermy and hydrotherapy units of the finest type are included in this section. Many benign and malignant growths have been removed with the electrosurgical unit in this department. The pathologist works in close harmony with the staff of this department, observing growths before removal and giving full and prompt reports on biopsies.

Working full time in the hospital affords excellent opportunity for consultation in all fields. The department of urology takes care of the syphilitic cases, but frequently the dermatologist is consulted.

Besides taking care of the officers and enlisted men, the Naval Hospital carries on an outpatient department, which cares for the families of the naval personnel. Here, pediatricians, obstetricians and gynecologists find their niche in the plan of the hospital.

Another function of the hospital is to examine applicants for appointments and survey out those who are unfit for duty. Every doctor finds these examinations a part of his work.

Although each specialist is recognized for his knowledge, he is nevertheless considered first

of all a physician. Being located on a medical ward, it is part of my work to help with the general medical cases.

The duty of serving as officer of the day occurs every five to ten days, and two physicians are placed in charge of the hospital. On these days the physician is taken back to his intern days. A patient with acute appendicitis may and has come in at night. A case of fracture, even an obstetric case may need his attention. Help is on call if needed, but each medical officer is encouraged to reacquaint himself with the common procedures in order to be ready for duty whenever he may be needed on land or sea.

Under able and progressive leadership the break from private practice has become less hard and with the added stimulus of Pearl Harbor, one finds work that can be pleasant and interesting. Above all there is a great sense of satisfaction in knowing that the dermatologist, as well as every qualified practitioner of medicine, can do his part in carrying out the mission of the medical department of the Navy, which is to "keep as many men at as many guns as many days as possible."

Jacksonville Naval Hospital.

DISCUSSION

Dr. H. W. Coleman, Jacksonville: The members of the Association are disappointed, I am sure, that his duties are such that Dr. Sompayrac was unable to be here to give his paper, and I know he appreciates the kindness of Dr. Wilson in making such an excellent presentation for him.

Industrial medicine is a new branch of medicine at the Naval Air Station in Jacksonville. Most of the activities are confined to the large assembly and repair shop. There over half of the industrial cases are cases of dermatitis. It is for these cases that I have to call on Dr. Sompayrac over at the Naval Hospital.

Most of the cases of dermatitis come from the shop where the motors are disassembled and the parts cleaned. After an airplane motor has been run for from five hundred to seven hundred hours, it is overhauled whether it needs it or not. The number of motors to be overhauled may be estimated by the vast number of planes over Jacksonville each day. This number is increasing, I am glad to say.

At one end of the disassembly shop is a group of mechanics tearing down the motors. The small parts are put in a vat containing a creosol-chlorinated hydrocarbon solution in which they are cleaned by hand. They are rinsed in kerosene. As pointed out by Dr. Sompayrac, negroes are used for this work because of the natural resistance of their skin. The large motor parts are boiled in a nearby vat containing creosol so as to remove the grease and paint. The final step in the cleaning is done by immersing the parts in trichlorethylene fumes.

It was easy to understand the primary contact dermatitis which developed in the negroes working with their hands in the cleaning solution, and the oil folliculitis which developed in the mechanics who wore soiled, oily clothing, but for a while Dr. Sompayrac and I were at a loss to explain the eczematoid dermatitis developing in the workmen in the extreme end of the shop and involving their arms, neck and face, all exposed parts. We soon learned that it could be controlled by painting the skin with compound tincture of benzoin, or by covering the arms with sleeves. It then became obvious to us that the dermatitis was caused by the contact of the fumes, a combination of trichlorethylene, kerosene and creosol, with the skin. This was remedied by exhaust ventilation carrying off the fumes.

We have also seen some allergic dermatitis. This form of the disease would subside when the patient left the job and would promptly recur on his return. In cases of this type the patch test with the suspected chemical in olive oil was used, and I served as a control. These cases were remedied by removing the patient whose reaction was positive from the offending substance.

I want to take this occasion to thank Dr. Sompayrac for his services as dermatologist, for they are essential to the department of industrial medicine.

Dr. Wiley M. Sams, Miami: I am glad to have the opportunity of discussing Dr. Sompayrac's paper and, in a sense, of speaking for the dermatologists of the state of Florida.

There are approximately 16 physicians limiting their work to dermatology in Florida. Four of them are in the service, 2 in the Army and 2 in the Navy. It is gratifying to hear that their special knowledge and training are being utilized, and this change in attitude on the part of the service is, I think, most desirable.

There is a distinct possibility that a large number of physicians of the state who are under 45 years of age will, in some measure, contribute their efforts in some organization before the end of the war. Those of us who have had some particular training, or have some special aptitude, naturally hope that we will be able to contribute our share in that branch of medicine in which we feel we are most efficient. If some way of distributing physicians can be worked out, I believe we can contribute a greater part toward the war effort.

For some time I have realized the problem involved in developing specialists in either the Army or the Navy, and so far but little effort has been spent in that direction. I do not know how many are familiar with the usual routine in the Navy, but those entering are usually given a rating of Lieutenant (j. g.), and if they have not had an internship, they are assigned to a hospital for one year's service. After this they are usually assigned for sea duty for one or more years and then are sent back to a hospital, or to foreign shore service. Perhaps when they reach the age of 40 or so, when most men feel that they have learned enough on a particular subject to be a qualified specialist, they are assigned as the head of a department in one of the Naval hospitals, where for a few years they have an opportunity to practice medicine in a group, and at that time they may be head of some department in which they have acquired special knowledge. When he finishes this tour of duty, or when he is selected for higher rank, the medical officer is usually shifted to administrative work, and for this reason the service seldom develops older men who have acquired long experience in any particular line. The frequent change of location and the shifting from one post to another and one type of work to another develops men who are well grounded in the type of work which the Navy requires, but do not afford opportunity for limited specialization. This observation is not offered as criticism, but merely as the policy of the Navy, for this plan best suits its particular need.

It is gratifying to hear that syphilis is now a rare disease in the Navy. If such is the case throughout the service, it can be attributed to preventive medicine. It will require much careful work to maintain such a record, now that the organization is distributed over a world wide front.

Dr. J. F. Wilson, Jacksonville (concluding): Although I was in the Navy during the last war, I do not feel qualified to discuss Dr. Sompayrac's paper. At that time there were no specialties recognized except eye, ear,

nose and throat, roentgenology and possibly laboratory work. All the junior officers did work identical with that of interns in civilian hospitals.

It seems to me the system wastes talent by using specialists as general practitioners. I know of a surgeon who is doing chest work, an eye, nose and throat specialist on recruiting duty and a psychiatrist doing general practice.

It seems to me if the men were used for work in which they are specially qualified that it would result in better work all around and fewer hospital days for the men in the service.

THE SPLENOMEGALIES WITH SURGICAL INDICATIONS

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The spleen is an organ whose functions have long been veiled in uncertainty and almost in mystery. Its removal, even when it is normal, seems to have no adverse effect on the general well-being of the patient. When it is grossly enlarged, the symptoms produced are largely the effect of size and displacement of other abdominal structures. Enlargement in the presence of certain infections would seem to give it a place in the development of immunity. It may also act as a filter removing bacteria and other harmful materials from the circulation. It is concerned with the destruction of erythrocytes and the storage of iron. It produces lymphocytes and may also produce various hormones which have to do with the production of red cells by the bone marrow, with the tone of the gastrointestinal musculature, with the coagulation of the blood and with various other functions still in the realm of probability. In diseases such as purpura hemorrhagica and familial icterus its role is definite, and arrest or cure uniformly follows its removal.

To the pathologist the spleen is a disappointing organ. In only a few diseases are the changes characteristic. Primarily he observes hyperplasia or atrophy, congestion or anemia and metaplasia or fibrosis. Such changes occurring singly or in various combinations constitute the usual syndrome and are of themselves rarely diagnostic. He, therefore, endeavors to correlate his observations with the blood picture and other manifestations of the disease process in order to arrive at a definite diagnosis.

Not many years ago, splenomegaly was readily differentiated into three or four simple types comprising mainly the leukemias, Banti's disease and the malarial spleen. Today so many different types of splenic enlargement are recognized that accurate diagnosis is often a matter of group effort. In taking up the various splenomegalies an effort will be made to present the several types briefly and to give only the major characteristics, thus avoiding extensive discussion as much as possible.

Read before the Fourth Annual Meeting of the Northeast Medical District, Daytona Beach, October 3, 1940.

MOBILE SPLEEN

The wandering or mobile spleen is commonly enlarged because of vascular stasis. It may be found at any point in the abdomen and even low in the pelvis. Gangrene from acute strangulation of its blood supply is a common occurrence. Pressure or traction on adjacent organs may give rise to a variety of symptoms, the usual syndrome suggesting intestinal obstruction, or a strangulated ovarian cyst. By reason of the long pedicle splenectomy is particularly easy and is usually carried out when the organ is encountered unexpectedly. Fixation of the spleen to its normal position (splenopexy) is not advised.

ABSCESS

Abscess of the spleen is of infrequent occurrence and is usually a postmortem finding. It may arise from an infected hematoma or infarct and as a metastatic abscess. The diagnosis is difficult because the nature of the disease is obscure, presenting the characteristic features of a septic process until perisplenitis produces localized pain and tenderness. Rarely a splenic friction rub can be heard. Pain may radiate to the left shoulder because of diaphragmatic irritation. With timely intervention and drainage of the abscess or, if possible, splenectomy the condition changes from a hopeless state to one of much promise. A considerable number of successful cases of splenectomy for splenic abscess have been reported.

TUBERCULOSIS

In a similar manner tuberculosis of the spleen occurs usually as part of a generalized invasion. If such involvement constitutes the major part of the syndrome, splenectomy is indicated. A few cases of apparent primary tuberculosis of the spleen have been reported. Bunch reported a case of this type which simulated Banti's disease. Winternitz reviewed the subject of primary tuberculosis of the spleen and reported 51 cases.

SYPHILIS

The spleen is involved in all stages of syphilis except the primary. In congenital cases this or-

gan may be enormous in size, and the clinical picture is that of splenic anemia or von Jaksch's anemia, varying somewhat with the age of the patient. The spleen shows a diffuse fibrosis and thickening of the arterial walls. Progress of the condition results in Banti's syndrome if the patient is not properly treated. In acquired syphilis the splenic enlargement in the tertiary stage is usually associated with syphilitic hepatitis and cirrhosis of the liver, commonly called hepar lobatum. I well recall such an instance in which antisyphilitic treatment failed to improve the condition and in which splenectomy was attempted. The collateral circulation encountered was so massive, not only in the abdominal wall but in all structures about the liver and spleen, that the attempt was abandoned. In more favorable cases splenectomy is of distinct benefit, and following this procedure antisyphilitic treatment may be much more effective.

MALARIA

Enlargement of the spleen is a clinical feature of chronic malaria. Since distribution of the parasites is systemic and the spleen does not serve as an incubator, splenectomy is rarely indicated. It is employed on occasion because of the massive size of the organ and symptoms of mechanical origin resulting from pressure and weight.

HODGKIN'S DISEASE

Splenic enlargement may occur early or late in the course of Hodgkin's disease. In a few cases splenomegaly has been the only clinical evidence of the disease. The pathologic changes in the spleen and lymph glands are as a rule readily diagnostic. Early predominance of eosinophils is followed by the presence of Dorothy Reed giant cells and fibrosis of the glandular structure. Splenectomy would be indicated in primary splenic Hodgkin's disease if diagnosis were possible, but no such instance has been reported.

LEISHMANIA

There are three diseases caused by different varieties of a protozoan parasite belonging to the genus Leishmania. They are all conveyed to man, although perhaps not exclusively, by different sandflies. Two are largely local diseases, namely, oriental sore and espundia; the latter is sometimes termed American or Brazilian leishmaniasis. The three varieties of Leishman protozoa closely resemble each other. On culture mediums and in the vectors they are flagellated and have a fusiform shape, while in man they lose their flagella and are chiefly found within endothelial and mononuclear cells.

Kala-azar is a general systemic infection associated with a massive splenomegaly, mainly restricted to India and China. The protozoa are found in the endothelial cells of the internal organs, particularly in the reticuloendothelial system of the spleen, liver, lymph glands and bone marrow, as well as in the circulating blood. The disease develops with a regular or irregular pyrexia, together with anemia, leukopenia, diarrhea, emaciation, edema and great enlargement of the liver and spleen. Complications arise due to secondary infections and a hemorrhagic tendency. Diagnosis depends on the demonstration of the parasite either in the peripheral blood or in the spleen, liver or gland pulp obtained by puncture. The Leishman-Donovan bodies are characteristically found in the reticuloendothelial cells, and their presence confirms the diagnosis.

Treatment rests upon the use of antimony in some form. If the patient improves under such treatment, together with blood transfusions and general hygienic measures, and the spleen still remains unchanged, splenectomy may be considered.

SCHISTOSOMIASIS

Schistosomiasis is endemic in Porto Rico and Venezuela. It reproduces Banti's syndrome in every detail. The cause is a blood fluke which resides in the vascular plexuses of the mesentery and the portal system. The discharge of eggs into the intestinal capillaries produces an intense local reaction of the intestinal wall with diarrhea and bloody mucoid stools. Diagnosis depends upon the identification of the ova in the feces. Following deposition of the eggs in the liver a pseudotubercle or fibrous nodule is formed. If the infestation is sufficiently heavy, a severe form of cirrhosis results with splenomegaly and ascites resulting in a syndrome similar to that of Banti in all particulars. Antimony given intravenously is a satisfactory remedy if employed early. In the late stages of the disease treatment is of little avail. There are few data relative to splenectomy in this condition, although it would seem to be definitely indicated in certain cases. Rousselot reported 2 cases presenting a late visceral form of schistosomiasis in which splenectomy was performed with excellent results.

PORTAL CIRRHOSIS

Cirrhosis of the liver is a chronic disease inevitably fatal. The commonly accepted etiologic factors, such as alcohol and spices, can be removed, and by dietary management life may be prolonged. Recent investigation also suggests that vitamin deficiency may be an important factor. Under normal conditions it has been estimated that the spleen furnishes from 15 to 20 per cent of the blood brought to the liver by the portal vein. With the spleen increased to several times its normal size this percentage is likewise increased. Removal of the spleen reduces the portal circulation by that amount and so decreases the load and demands upon the liver. The results of splenectomy are far from brilliant, but it is probable that in cirrhosis this procedure is the last resort while in splenic anemia it is the first.

Gastric hemorrhage is a common complication of portal cirrhosis. Varices form in the stomach and lower part of the esophagus, probably as part of a collateral circulation. Hemorrhages from such varices can be violent and frequently they terminate the life of the patient. This feature is common not only to portal cirrhosis, but to many types of splenomegaly, particularly those observed in splenic anemia or Banti's disease, and in thrombosis of the splenic vein. This similarity leads to the suspicion that they may all have a common etiology, with only minor variations in the clinical course.

SPLENIC ANEMIA

Although the term splenic anemia was first employed by Gretzel in 1866, it was Banti in 1883 who stimulated interest in the condition. In a monograph he discussed splenomegaly with cirrhosis of the liver and ascites, and to this syndrome his name is still applied. In 1898 he further characterized the disease as one of progressive splenic enlargement with anemia and leukopenia, progressing on to obvious cirrhosis of the liver with jaundice and ascites. He believed that the spleen itself elaborates a toxic substance which causes degenerative changes in the veins as well as cirrhosis of the liver. Since that time, although various types of splenomegaly have been separated from this group, it still remains the major division of splenomegalies. The exact etiology is unknown. Two theories prevail. One is that the major cause is increased portal venous pressure due possibly to early changes in the liver or to venous obstruction caused by thrombosis, with the spleen enlarging in a more or less passive manner. The second theory presupposes a primary change in the spleen with portal cirrhosis following as a secondary development.

In support of the first theory Rousselot reported a portal hypertension of from three to five times normal in all cases tested and mechanical venous obstruction in 70 per cent of all cases examined. He further observed that by injecting salicylate particles into the portal circulation of the dog at intervals he was able to reproduce Banti's syndrome in all particulars.

By contrast, the clinical picture of splenic anemia often presents well developed splenomegaly before hepatitis is evident. Furthermore, the disease tends to occur in youth, a period of life usually free of cirrhosis, and lastly, the clinical features change so abruptly in favorable cases that a noxious factor seems to be eliminated with removal of the spleen.

The spleen itself shows capsular thickening, a dry beefy cut surface and reticular and trabecular fibrosis. Splenectomy in this condition results in a relatively high mortality. The operation is difficult by reason of perisplenic adhesions and collateral vessels. The operative mortality varies from 7 to 10 per cent. Contributing to this mortality are recurrent hematemesis and a tendency to vascular thrombosis. About one half of the patients are permanently cured, and the remainder may live for many years. Recurrence of gastric hemorrhage is their greatest danger. The following case illustrates some of the difficulties encountered in treating splenic anemia.

Phillip, aged 22, was first seen in March 1939. He had noted a mass in the upper portion of the abdomen on the left side for three or four years. One year previously he had become jaundiced and at that time hematemesis had first occurred. Hemorrhages had occurred three times since then. For four years he had experienced gastrointestinal upsets characterized by nausea and vomiting. Physical examination disclosed a very large spleen, and anemia was present. Examination of the blood showed an erythrocyte count of 2,555,000 and a leukocyte count of 2,300 with a hemoglobin estimation of 42 per cent; the blood platelet count was 60,000; the bleeding time was eight minutes; the coagulation time was three minutes; and the test for fragility gave normal results. The icteric index determination was 7, and the results of the Kahn test were negative.

The course of the disease while the patient was in the hospital was marked by many gastric hemorrhages. Repeated transfusions were used to build up the blood, which was again and again depleted by recurring hemorrhage. Finally he was brought to a reasonable state, and a splenectomy was performed. Adhesions were so dense between the spleen and the liver that separation by knife dissection was necessary. The surface of the liver was smooth, but the consistency was firm. A biopsy of the liver demonstrated newly formed connective tissue in the periportal fields, proliferating bile ducts,

and a mild inflammatory reaction, all rather typical of a periportal cirrhosis.

The spleen was greatly enlarged, measuring 24 cm. in length and 9 cm. in width. The consistency was firm, and the capsule was thickened. Microscopic examination showed rarification of the lymph follicles with a great increase in connective tissue; areas of hemorrhage and swollen endothelium lining the sinuses were also observed.

Convalescence, except for temperature postoperatively, was normal. There has been no further bleeding. The patient looks well and has gained in weight. The result certainly warranted surgical intervention.

COOLEY'S ANEMIA

Erythroblastic anemia, or Cooley's anemia, is a chronic disease of childhood, sometimes regarded as a stage of Banti's disease. Certain peculiarities, however, separate it definitely from the general classification of splenic anemia. It seems to affect only children of the Mediterranean races, particularly the Greek, Italian and Syrian. It is characterized by mongoloid facies, splenomegaly and the presence of large numbers of nucleated red cells in the circulating blood. The anemia is usually of severe grade, hypochromic in type and associated with definite leukocytosis. There is progressive enlargement of the abdomen because of the great degree of splenomegaly and a lesser degree of hepatomegalia. The skin is pale and slightly icteric. The peripheral lymph glands are enlarged, and a generalized skeletal change is visible on roentgen examination because of great hyperplasia of the bone marrow. This hyperplasia concerns mainly the erythroblastic elements and to a lesser degree the myeloid, so that the marrow resembles that seen in pernicious anemia. The spleen is greatly enlarged and shows extramedullary hematopoiesis of the erythroblastic type and a lesser myeloid response.

Following splenectomy there is a tremendous normoblastic response, but the essential blood picture remains unchanged. Thus, while splenectomy is of little curative value, it relieves the growing child of a massive tumor and may retard the progress of the disease. Diamond, by contrast, believed that splenectomy is definitely contraindicated because of the tremendous increase in circulating nucleated erythrocytes, which are no longer destroyed by the spleen. Severe anemia finally terminates the life of the child.

GAUCHER'S DISEASE

Gaucher's disease is a chronic familial disturbance of lipoid metabolism, in which there appear certain cells of specific morphology in the spleen, liver, lymph glands and bone marrow. They are produced by the excessive storage of a cerebroside (kerasin) in the cells of the reticuloendothelial system of these organs. Frequently the spleen is first and practically the only organ affected and it may reach tremendous size. The disease has an insidious course. Anemia and leukopenia develop with occasional hemorrhages. The skin shows a brownish pigmentation (hemochromatosis), and yellowish wedge-shaped elevations may be observed in the conjunctiva. Changes in the bone marrow can be recognized by roentgen examination.

The spleen on microscopic examination shows throughout the pulp and sinusoids, large pale round or spindle-shaped cells with small eccentric nuclei, sometimes termed foam cells, which are characteristic of the disease.

Splenectomy gives definite relief. Diamond reported 5 cases with excellent results in each. The disease may, however, progress persistently in other portions of the reticuloendothelial system.

NIEMANN-PICK DISEASE

A second disease of faulty lipoid metabolism closely resembles Gaucher's disease. It is called Niemann-Pick disease. Here, the reticuloendothelial system retains a phosphatide rather than a cerebroside as in Gaucher's disease. There is a pronounced splenomegaly developing in early infancy, associated with brownish pigmentation of the skin, malnutrition and retarded development. In the majority of cases it occurs in children of Jewish descent. As the disease is invariably fatal in early life, surgical therapy is of no avail.

CHRONIC HEMOLYTIC JAUNDICE

Chronic hemolytic jaundice, sometimes termed hemolytic splenomegaly or spherocytic anemia, is characterized by a fluctuating type of jaundice due to the increased fragility of the erythrocytes as shown by lysis in hypotonic salt solution. This tendency is attributed to their spherical form. Cells of this shape constitute from 10 to 25 per cent of the total number of erythrocytes according to Thompson, the remainder being reticulocytes or normal red cells. This author concluded that, as these spherical cells appear to be selectively removed from the circulation by the spleen, there is enough evidence to warrant the assumption that all the increased destruction of red blood cells in the active phase of the disease takes place within the spleen. Removal of the spleen promptly cures the jaundice, although the spherical form of erythrocytes persists in the general circulation for life.

There are supposed to be two types of the disease, one congenital and the other acquired. In the familial type all members of a family may not have an active form of the disease, for in some only the spherical erythrocytes are present without the jaundice. It occurs in both sexes and may be transmitted by either. The jaundice is never deep, and the urine does not contain bile; but bile is abundant in the stools, and the indirect van den Bergh test gives strongly positive results. If bile appears in the urine, it is evidence of some secondary obstructive type of jaundice due to bile thrombi in the bile canaliculi or a stone in the common duct. Gallstones are present in about two thirds of the chronic cases. The anemia varies from moderate to severe, with a reticulocyte response of 10 per cent or more, depending upon the severity of the anemia.

The course of the disease is interrupted by crises of increased hemolytic activity. This results in general malaise, abdominal pain, fever, deepening jaundice, increasing anemia and enlargement of the spleen. Early splenectomy for the infant or young child may, therefore, be indicated as a life-saving measure.

Splenectomy in a favorable case is particularly easy because of freedom from adhesions about the spleen, and the mortality is correspondingly low. Pemberton reported 4 fatal cases in a series of 135 cases in which the patient was subjected to splenectomy. Fortunately, permanent arrest or cure of the disease can be expected in all cases of true congenital hemolytic icterus. One complication which follows splenectomy is the building up of a high platelet level, with pain, fever, leukocytosis and sometimes convulsions as an evidence of intravascular thrombosis. Fortunately this difficulty usually subsides within a short period of time.

There follows the description of a case that is typical of the condition:

Roger, aged 13, was first seen in 1935. He had experienced recurring attacks of jaundice with nausea and vomiting for many years. At one time he had been sick one week out of four, but recently his attacks had occurred at intervals of from six to twelve months. Between attacks his health had been excellent.

His mother had had a splenectomy for a similar condition. One half-sister was similarly affected. A maternal uncle was apparently free from the disease, as were his children.

On physical examination the only abnormality noted was an enlarged spleen. The patient was not jaundiced appreciably, the icteric index determination being 3.5. Hemolysis of the red cells began at .5 and was complete at .38. The hemoglobin estimation was 70 per cent, and the erythrocyte count was 3,420,000. The van den Bergh test was reported as giving negative results.

Splenectomy was carried out with particular ease because of the absence of adhesions. The liver and gallbladder seemed normal. The patient's convalescence was uneventful. During the ensuing five years his health has been excellent, and from a stunted abnormal child he has developed into a youth well proportioned and normal in every respect. His only worry seems to be how he can join the navy with his medical background.

THROMBOCYTOPENIC PURPURA

Thrombocytopenic pupura is a clinical entity of unknown cause characterized by a hemorrhagic tendency, by a diminution of the platelets in the circulating blood, and by a spleen little if any enlarged. Since pupura is a symptom common to various infections, leukemias and anemias, and is produced by various drugs and toxins as well, a careful study of the clinical characteristics is essential. In differential diagnosis aspiration and study of the bone marrow to rule out other conditions are at times essential.

Purpura hemorrhagica is a disease of early life occurring in an acute and a chronic or remittent form. Study of the blood shows a low platelet count, 60,000 or less as a rule, prolonged bleeding time, normal coagulation time, absence of clot retraction, appearance of petechiae in the skin distal to a tourniquet blocking the venous return, and a spleen normal in size. Any case in which the spleen is easily palpated is more apt to belong to the symptomatic group of purpuric diseases. Pathologically the spleen, except for congestion, appears normal.

Peculiarly enough, splenectomy arrests the disease. Whipple observed that even clamping the pedicle preparatory to removing the spleen stops the general bleeding. Pemberton reported an operative mortality of 7 per cent in a group of 57 cases, with permanent remission in 63 per cent of the survivors and improvement in an additional 35 per cent.

POLYCYTHEMIA VERA

Polycythemia vera is a disease of unknown cause presenting a clinical syndrome of cyanosis, splenomegaly and polycythemia. It is characterized by an increased blood volume as well as an elevated erythrocyte concentration and a viscosity of from five to eight times normal. The erythrocyte count may be increased to 15,000,000 with an accompanying extensive hyperplasia of the red bone marrow. The spleen is both congested and hyperplastic, varying in size so that at times it may not be palpable.

Cerebral or intestinal thrombosis with hemorrhages, cirrhosis of the liver, or cardiac failure

tends to terminate the condition. In some cases periods of arrest or regression may prolong the disease over many years.

Roentgen therapy over the long bones to check the formation of the red cells, or some drug such as phenylhydrazine because of its hemolytic effect, tends to reduce the red cell content of the blood and to produce symptomatic relief. Splenectomy is generally considered unwise and useless, but remarkable results have been obtained in a few cases. For the present, splenectomy, although not considered standard treatment, is a matter of some interest.

LEUKEMIA

There are numerous varieties of leukemia, differentiated by the types of leukocytes appearing in the peripheral blood. The spleen may be of enormous size, as seen in the myelogenous type, or of moderate size as in the lymphatic variety.

The subject is largely medical and so extensive that it cannot be considered in this review. Surgical experience has shown that splenectomy can be safely performed after the spleen has been reduced in size by roentgen therapy, but in the final analysis the procedure of splenectomy does not benefit the patient suffering from leukemia.

SPLENIC TUMORS

Primary tumors of the spleen are rare. Angiomas, fibromas, chondromas, osteomas and lymphangiomas have been reported. The sarcoma group constitute the only type of malignant disease primary in the spleen. Most of these are met as postmortem curiosities although the treatment of primary splenic tumors should be by splenectomy, if the tumor produces clinical symptoms.

Cysts of the spleen, although also rare, comprise a group whose surgical management has met with particular success. The reported cases

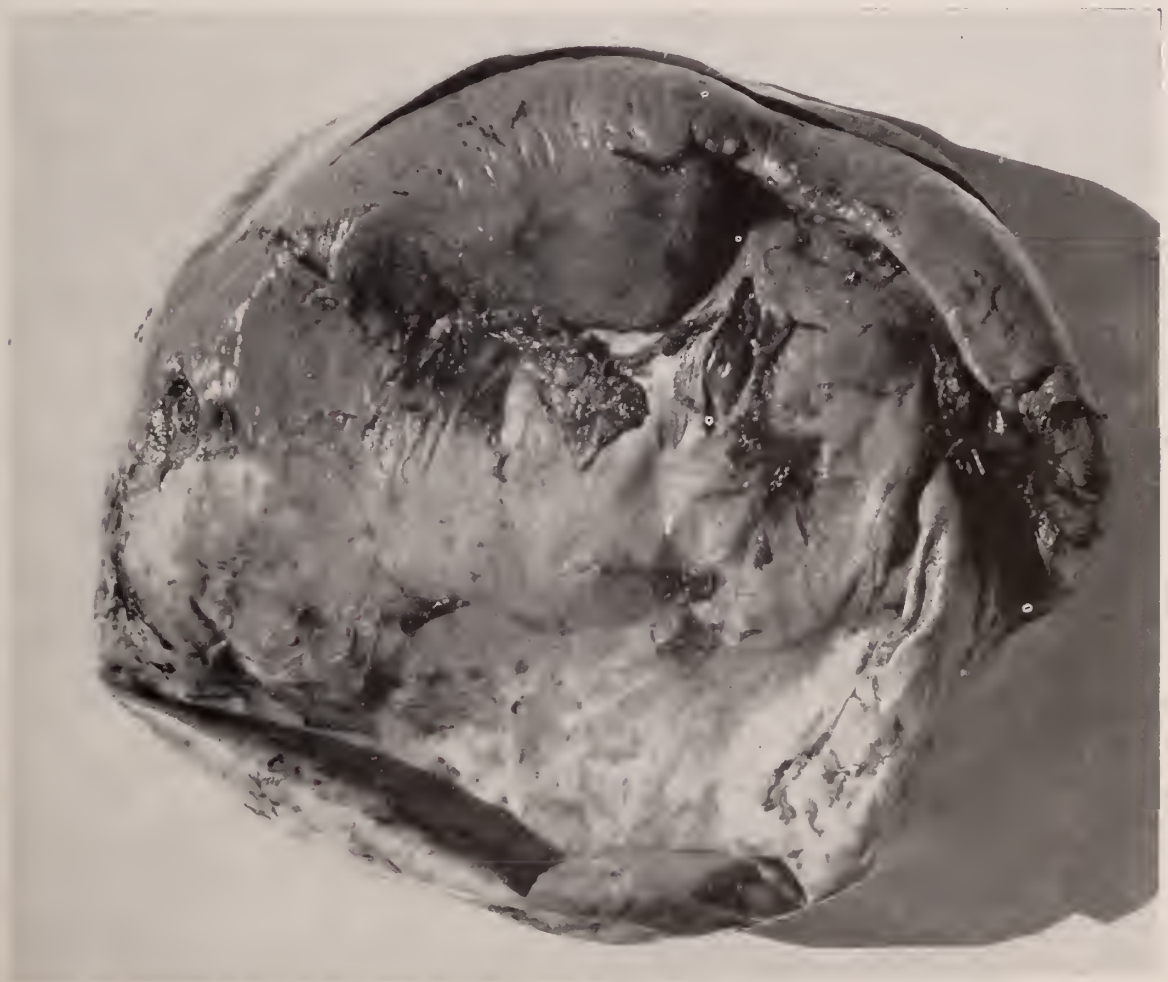


Fig. 1. Cyst of the Spleen. The spleen is flattened out to form the anterior wall of the cyst. The fibrous walls of the cyst seen below the spleen are collapsed from rupture during surgical removal.

in the American literature now number 91, according to Sherwin, Brown and Liber. They are divided into the parasitic and nonparasitic varieties. The usual cyst is large and unilocular, the contents hemorrhagic, or sometimes clear.

The case described presented a therapeutic problem in that pregnancy coexisted with a large cyst of the spleen:

Mrs. O. entered the hospital on May 17, 1940, because of a mass in the upper portion of the abdomen on the left side. It had first been noted one year previously. There was no history of trauma. On examination, it was observed that the mass extended from the ribs on the left to the level of the umbilicus and across into the right side of the abdomen. The patient was four months pregnant, and the question presented was which condition should give way as there was not room in the abdomen for the spleen and a term pregnancy. In the past she had gone through a cesarean section for contracted pelvis. Her general condition was satisfactory. The hemoglobin estimation was 65 per cent, and the erythrocyte count was 4,170,000. The fragility of the red cells was normal, and there was a bleeding time of three minutes.

There was some discussion as to the feasibility of performing a therapeutic abortion before attempting to remove the spleen, but this measure was avoided, and on May 20 a splenectomy was performed. The spleen was rounded in contour with intimate adhesions between the cyst wall and the posterior abdominal wall. Fortunately, the adhesions were not vascular and after rupture of the cyst, the cyst walls were peeled from the posterior part of the abdomen without difficulty. The brownish exudate which escaped from the cyst was removed from the abdomen by lavage, and the operation was completed.

The patient was given a transfusion postoperatively after return to her room. The convalescence has been uneventful, and she is now awaiting delivery by a second cesarean section.

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DIABETES MELLITUS

AN ANALYSIS OF CASES OBSERVED IN THE OUTPATIENT DEPARTMENT OF THE DUVAL COUNTY HOSPITAL DURING THE LAST FIFTEEN YEARS

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Diabetes as a recognized disease entity appears to be age-old. About 50 A. D. Celsus, a Roman physician and writer, not only defined this disease but advised treatment and a diet. In the same century Areteus, a Greek physician, described it as "melting down the flesh and bones into urine" and named it diabetes, which, roughly translated from the Greek, means "to run through a siphon." Since then innumerable scientists have sought the cause of the disease, but it was not until 1899 that it was established when Minkowski and von Mering extirpated the whole pancreas of a dog and found the pancreatic gland to be the seat of diabetic disease. In 1869, however, Langerhans had discovered the division of the pancreas. Various experiments proved that the islands of Langerhans are ductless glands, secreting an antidiabetic hormone, for which Sir Sharpey Schafer in 1916 proposed the name insulin, meaning, island of the pancreas. In 1922 Banting and Best, using the pancreas of an unborn calf, finally extracted the product, and its commercialization followed.

In 1926, under the supervision of one of us (T. Z. C.), a special clinic for the treatment of diabetes mellitus was organized in the outpatient department of the Duval County Hospital. In 1934 there were 48 patients under observation, in 1939, 128, and during 1941, 160. No attempt is made here to discuss the history or specific treatment of these patients in any detail.

The patients currently under observation are divided as follows: white 86, of whom 26 are males and 60 females; colored 74, of whom 16 are males and 58 females, making a total of 42 males and 118 females. The average age in 1939 was 50.6 years with extremes of 17 and 79 years. At present the average age of the white patients is 47.6 years, and the extremes are 5 and 74 years. The average age of the colored patients is 46 years, the extremes being 18 and 75 years. A possible explanation of the lowering of the average age since 1939 lies in the transferring of all diabetic patients from the department of pediatrics to the diabetic clinic. Of the 160 patients under treatment, 22 control the condition by diet; 5 receive plain insulin, 126 protamine-zinc insulin and 7 a combination of plain and protamine insulin *(table 1)*. The largest amount of insulin being taken is 125 units (protamine-zinc insulin 50 units and plain insulin in three injections of 25 units each). One patient is allergic to protamine. The consensus in this clinic is that many of the patients now using insulin could do without the drug if they would adhere more closely to the diet prescribed. Patients of the type attending this clinic and even those of the more intelligent groups diet more carefully and report more regularly if they are required to take a small amount of insulin. Once off the insulin, they have a tendency to feel that they are cured.

TABLE 1. CASES OF DIABETES CONTROLLED BY DIET, BY INSULIN, OR BY BOTH.

78.6%	(126)	controlled by protamine-zinc insulin and diet
13.7%	(22)	controlled by diet alone
4.3%	(7)	controlled by plain and protamine insulin
3.1%	(5)	controlled by plain insulin

The average interval between visits of the patients to the clinic in 1934 was six weeks, and in 1939 it was ten weeks; at present it is ten weeks. The severity of the condition and the cooperation of the patient are the chief factors which determine the length of the interval. If there is evidence that a patient is persistently violating instructions, he is warned in the presence of a house physician and a nurse. A notation is made on the chart that he has received his first warning and must show improvement within thirty days. If at the end of thirty days the patient's lack of cooperation continues and there is no improvement, he is given a second warning and required to re-

port at the end of an additional thirty days. Thereafter if he still continues to disregard instructions, he is excluded from all benefits of the institution including insulin and medical services. Notice of this procedure, carrying the authority of the Welfare Board, is posted where it can be read by the other diabetic patients. One further consideration in this connection is that with the consent of the physician in charge the patient who has been excluded may be reinstated.

It has been the practice in this clinic to keep the blood sugar level at approximately 120 to 130 milligrams per hundred cubic centimeters. It is believed that maintaining the blood sugar value around this level has and will prevent many reactions from insulin among these patients. While there is a difference of opinion it is frequently claimed that the incidence of tuberculosis is higher among diabetic patients than in the average population. In this series it has been lower than that of the general population. Relatively high blood sugar values with the maintenance of normal or near normal weight may be a factor in keeping this incidence so low.

A painstaking check is kept on each patient coming to the clinic: (1) On the patient's chart the history and the results of the physical and laboratory examinations are recorded. A notation is also made at each visit of the diet, the amount and type of insulin administered, the weight and the date for the patient's return. In children, a record of height is kept. (2) On a calendar kept by the supervisor of the clinic the day the patient is to return is also recorded, as well as the amount of insulin given. (3) The dietitian attends the clinic and records the patient's diet. From her the patient receives details concerning the diet. (4) A member of the social service department also attends so that when it is deemed necessary, the patient's progress can be investigated at home. By means of this combined system it is easy to tell whether or not the patient is cooperating to the best of his ability. In several instances, however, though the patient seemed to be cooperating, the blood sugar determination continued to remain high, and it was discovered that he had been injecting insulin into the same place over and over, thus producing a large, brawny, indurated area. With a change to other areas and the use of the same amount of insulin, the sugar content of the blood returned to the desired level. It is important to stress to the patients the use of different areas on injecting insulin.

In treating a patient with diabetes one may become prone to forget the possibility of concomittant disease. The analysis of this series of cases revealed that in 50 cases or 31.2 per cent some other disease was present concurrently *(table 2)*.

TABLE 2. OTHER DISEASES OCCURRING IN THE DIABETIC PATIENT

14—Syphilis
18—Hypertension without heart failure*
2—Hypertension and heart failure*
3—Hypertension and cerebral hemorrhage*
3—Pulmonary tuberculosis, in one case associated with hypertension and heart failure
2—Cataract
2—Uterine fibroids
1—Urethral caruncle
2—Thyroid enlargement (one unilateral, one bilateral)†
1—Lymphopathia venereum
2—Hypertrophic arthritis

*No attempt is made here to classify the hypertension although it was mainly arteriosclerotic.
†In both patients the basal metabolic rate was within normal range.

During the period of the operation of this clinic, 55 patients with diabetic coma were admitted to the hospital *(table 3)*. This number does not include patients with mild acidosis or those requiring regulation. Of these 55 patients, 31 died, a mortality of 58 per cent. The interesting and outstanding factor is the difference in the mortality rate among the treated and untreated patients with coma; of 33 who had not had previous treatment 29 died, a mortality of 87.9 per cent; among the 22 who had had previous treatment only 2 deaths occurred, a mortality of 9 per cent. The records show that in every instance in which serious complications arose, notations had been made previously that the patient was noncooperative. On the other hand, there were extremely few complications, all minor, in cases in which the patients were cooperative.

TABLE 3. DIABETIC COMA

Coma or impending coma*	55 cases
Deaths	31 cases
Deaths among patients who did not attend the clinic or have previous treatment	29 cases
Deaths among clinic patients	21 cases
Mortality rate among those who did not attend the clinic or have previous treatment	87.9%
Mortality rate among those who attended the clinic	9%

*Stupor, but not complete unconsciousness.

Why is the mortality rate higher in the patient with diabetic coma who has not had previous therapy? In considering the prognosis in diabetic coma age, sex, blood sugar values, urinary sugar,

acetone content of the urine and the blood, and the carbon dioxide combining power must be considered. It is not known which of these is the chief factor in making a prognosis. In one patient the sugar content of the blood may be 500 mg. without acetone while in the next one it may be 300 mg. with acetone 4 plus. Too, diabetic patients die when the reaction for sugar in the urine is negative. Has the threshold for sugar been raised? The urine of six patients in this series was examined for acetone just before death; in 3 it was acetone free, in 1 it showed a trace, and in 2 it was 1 plus. Had the kidney threshold for acetone been raised? It is also known that of 2 patients in coma, the one with the lower carbon dioxide combining power may survive while the other with the higher combining power may die. Of course, as a rule, the lower carbon dioxide combining power the greater is the acidosis. The longer a patient is in coma the less is his chance for survival.

On an average in this series the patient who had previously been given insulin was in coma about twenty-four hours before admission, whereas the one who had not had it was in coma about forty-eight hours prior to admission. This longer period of exposure of the cells of the body to acidosis certainly must play a part in the prognosis. In commenting on the mortality, it might simply be stated that the majority of the patients died in less than sixteen hours, and several died within the period of one and one-half to eight hours after admission. A great number of complications and other factors arise that make it advisable to require hospitalization for the diabetic patient. Apparently, regardless of hospitalization and proper management, either medical or surgical, or both, a certain percentage of the patients will not recover. In addition to proper management and hospitalization, two factors are outstanding in determining the prognosis: (1) the degree of severity of acidosis plus the length of time acidosis has been present, and (2) the severity of the complicating factor plus the length of time it has been present.

Since the establishment of the clinic, it has been necessary to admit 72 of the diabetic patients to the hospital because of a complication or concurrent disease or injury *(table 4)*. This number does not include those admitted in coma, on account of mild acidosis, or for regulation. Of the patients thus admitted, 14, or 19 per cent, died. The concomitant factors in the cases that terminated fatally were: (1) Fracture: One patient had a compound fracture of both the lower extremities, and a second one had a fracture of the neck of the femur with subsequent pneumonia. (2) Cellulitis: One patient had severe cellulitis of the right leg and thigh. (3) Abscess: One patient had scrotal and perineal abscess with urinary extravasation. (4) Cerebral hemorrhage: Four patients had cerebral hemorrhage. (5) Myocardial failure: Two patients died of cardiac failure. (6) Gangrene: This complication was the most common and serious factor as it caused 28.0 per cent of the deaths. Of the 17 patients in the series with gangrene of the toes, feet, or legs, or a combination of these areas, 14 were subjected to amputation and 4 died. One had a pulmonary embolism; in another uremia developed.

If coma is included as a complicating factor, it becomes the outstanding cause of death. Of the 55 patients hospitalized because of coma 58 per cent died, whereas of the 72 admitted to the hospital because of complications, concomitant disease or injury only 19 per cent died. The fact that 93.6 per cent of the patients dying in coma had not attended the clinic offers an important reason for maintaining a diebetic clinic.

TABLE 4. HOSPITAL ADMISSION OF DIABETIC PATIENTS FOR OTHER CAUSES*

Gangrene of toes, feet, legs or combination	17
Cellulitis	16
Abscess (single or multiple)	14
Fracture	4
Cerebral hemorrhage	4
Myocardial failure	4
Operation: 2 appendectomies, 1 hysterectomy, 1 gastroenterostomy	4
Carbuncle	3
Pneumonia	2
Acute catarrhal cholangitis and hepatitis	1
Pulmonary abscess	1
Questionable chronic cholecystitis	2
TOTAL	72

*Patients admitted because of coma and mild acidosis or for regulation are not included.

SUMMARY AND CONCLUSIONS

From the study and analysis of the cases of diabetes observed in the last fifteen years at the Duval County Hospital, the following conclusions are warranted:

1. Diabetes, even the severe type, can be controlled if strict discipline is applied. Complete cooperation on the part of the patient is necessary. This can be secured only by explaining the disease to him and convincing him that he can and will be checked for failure to follow instructions with regard to insulin and diet.

2. Diabetes occurs more frequently in women than in men. The average age was 46.8 years in the series of cases presented.

3. The majority of the cases can be controlled by protamine zinc insulin and diet.

4. In 31.2 per cent of the 160 cases observed in the outpatient department of the Duval County Hospital during 1941 complication or concomitant disease occurred.

5. Coma, gangrene, cellulitis and abscess were the outstanding complications.

6. The maintenance of a diabetic clinic is an invaluable aid in controlling the diabetic patient. The mortality rate from coma among the patients who had not had treatment was 87.9 per cent, whereas among those who had received previous treatment it was 9 per cent. It follows that for a patient in coma who has had no treatment, the prognosis is much worse than for one who has had previous insulin therapy.

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THE USE OF EUCUPIN FOR THE PREVENTION OF POSTOPERATIVE PAIN IN PROCTOLOGIC SURGERY

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Postoperative pain following anorectal operations has always been considerably greater and more prolonged than pain following operations in most other regions of the body. Many patients are aware of this fact and approach such surgical procedures with the firm belief that agonizing, continuous and, at times, unbearable pain must be experienced, not to mention the added agony of the first bowel evacuation. Thus, it is not surprising that the majority of patients wish to avoid anorectal surgery and drag around with their trouble for years rather than seek relief. This delay on the part of the patient in seeking proper medical and surgical attention often causes a minor ailment to develop into one of a more serious and extensive nature; therefore, it becomes obvious that any method which will alleviate postoperative pain is one of the greatest benefactors of mankind.

Proctologists have long felt the need for such an anesthetic, and it is to them that the profession is especially indebted for the development of local anesthetics that have proved of inestimable value in preoperative and postoperative procedures. It is also greatly indebted to the chemists who have made possible newer and better preparations for the alleviation of pain.

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One of the first preparations developed for producing prolonged analgesia was introduced by Yeomans, Gorsch and Mathesheimer[1] in 1927. Known as benacol, it was an oily solution that produced unusually prolonged anesthesia. It consisted of:

Para-aminobenzoyl ethanol benzoate	5.00 cc.
Phenmethylol	5.00 cc.
Oil of Sweet Almond	90.00 cc.

This preparation was of particular value in the treatment of pruritis ani, but one had to guard against injecting it into the skin because of the possibility of producing a slough. About one year later, Gabriel[2] of London described two modified oily solutions which he called A. B. A. No. 1 and A. B. A. No. 2. The formulas were as follows:

A. B. A. No. 1

Anesthesin	3.00 cc.
Benzyl Alcohol	5.00 cc.
Ether	10.00 cc.
Sterilized Olive Oil	82.00 cc.

A. B. A. No. 2

Procaine	0.05 cc.
Benzyl Alcohol	10.00 cc.
Phenol	1.00 cc.
Sterilized Olive Oil q. s. ad.	100.00 cc.

Soon after the introduction of Gabriel's solutions, there appeared another similar to A. B. A. No. 1 called "St. Mark's Solution." It was used not only for its efficacy in the treatment of pruritis ani, but for its prolonged analgesic effect in other anorectal operations. Brenner[3] obtained excellent results with this solution in over 100 cases and then had 8 patients consecutively who exhibited great pain and sloughing. In 1935, Barr[4] announced another anesthetic in an oily vehicle. His formula was as follows:

Benzocaine	3.00 cc.
Benzyl Alcohol	10.00 cc.
Phenol	1.00 cc.
Sterilized Olive Oil	86.00 cc.

This preparation was similar to "St. Mark's Solution," but the ether was omitted and benzocaine was substituted for procaine. Its analgesic properties were similar to those of the other oily preparations. The chief advantage of this solution was in the omission of ether. Heretofore, patients had complained of the taste of ether after infiltration, and its removal was a decided improvement.

These solutions rapidly attained popularity among proctologists. Soon, however, rectal surgeons began to report alarming tissue reactions as evidenced by great induration, the formation of

abscesses and sloughing. These reactions were thought to have resulted from the pooling of the solution in the perianal tissues instead of its even distribution. Whether this result was due to faulty technic, too highly concentrated solutions, or one or more of the ingredients was not definitely known. Nevertheless, these undesirable tissue reactions unfortunately occurred even with treatment in the hands of careful and experienced men. These facts alone make the indiscriminate use of oil anesthetics in anorectal operations inadvisable since alarming tissue reactions are possible, especially when these solutions are employed by those not thoroughly familiar with this type of anesthesia.

In consideration of the factors mentioned, it becomes obvious that the primary need is for a water-soluble anesthetic of low toxicity that will give prompt anesthesia lasting from five to eight days and not attended by tissue reactions or sloughs. I feel that such a preparation has at last been produced and I should like to report the results I have obtained in 35 consecutive cases (table 1) using eucupin-procaine solution as an anesthetic agent of prolonged action.

Eucupin,* iso-amyl-hydrocupreine, is a cupreine derivative and somewhat closely related to quinine, but differs greatly in its anesthetic and germicidal efficacy. The local anesthetic action of eucupin was first described by Morgenroth and Ginsberg[5] and was reported to be from twenty to twenty-five times stronger than cocaine, although chemically it is not related to cocaine, procaine, or the other benzoyl esters. It also has a powerful bactericidal action as confirmed by Bruhn,[6] who reported it to be forty times more effective than phenol against staphylococci and streptococci, which are the most frequent causes of wound infection. Morgenroth and Bieling[5] also demonstrated that the compound was especially effectice against Bacillus tetani and Bacillus welchii. Bieling[7] discovered that the organisms of diphtheria, anthrax, malignant edema and tetanus, and the progenic cocci were destroyed by a solution of eucupin in a concentration of 1:10,000 even in the presence of protein.

The toxicity of eucupin is low, actually less than one-sixth that of cocaine and but slightly greater than that of procaine when administered by subcutaneous injection. It is neither advisable nor necessary, however, to use solutions of greater strength than 0.2 per cent for the purpose of infiltration anesthesia. Furthermore, eucupin is of great advantage when large quantities of the solution are used either for infiltration or for topical application.

This drug should be kept protected from light while stored, but it is stable otherwise and can be autoclaved without deterioration. Precipitation occurs when it comes in contact with alkalis; therefore, if the syringe has been boiled, it is advisable to wash it thoroughly in distilled water before filling it with eucupin.

De Takats[8] in 1926 reported on the use of a 1:1,000 solution of eucupin in combination with procaine and tutocain in 100 operative cases which included repair of hernia, thyroidectomy and minor surgical procedures about the head, face and neck. By this method, he obtained postoperative analgesia lasting about twenty-four hours. The solution did not cause tissue reaction, nor any disturbance in wound healing as shown both by microscopic section and by clinical observation of a large number of operative cases. He was particularly impressed with the powerful antiseptic property of eucupin.

In 1936, Kilbourne[9] reported his observations on the use of eucupin. He employed it as a topical application in 0.75 per cent solution and obtained excellent results after operation for anal fistula, pilonidal sinuses and hemorrhoids. Like de Takats,[8] he was greatly impressed with its bactericidal qualities in addition to its prolonged anesthetic action.

Manheim and Marks[10] two years later reported their observations in 14 operative cases, 1 of anal ulcer and 13 of hemorrhoidectomy, in which eucupin-procaine in saline was used. Only 3 patients required an opiate for postoperative rectal pain. Normal healing was noted in all, and analgesia lasted for from three to seven days. In 1938, Brenner[3] reported excellent results in 132 cases following anorectal operation, but he used eucupin solution in oil.

In my series of cases, I have been primarily interested in abolishing postoperative pain by the use of eucupin-procaine solution; therefore, it has been my routine to infiltrate the perianal tissues at the conclusion of the operation. The operative procedures have for the most part been performed under local, general, spinal, sacral or intravenous anesthesia with pentothal sodium.

On completion of the operation, the skin is again painted with tincture of mercresin or tincture of merthiolate, and from 3 to 32 cc. of eucupin-procaine solution is injected with a twenty

*The eucupin solutions used for this investigation were supplied through the courtesy of Rare Chemicals, Inc., Nepera Park, N. Y.

gauge, 2 inch needle. The technic I have worked out is as follows: The needle is first inserted at the three o'clock position, one inch from the anal margin. From 2 to 3 cc. of solution is injected fanwise just beneath the perianal skin from one to five o'clock, then with the left index finger inserted into the anal canal, about 7 or 8 cc. is infiltrated into the deeper perianal tissues around the sphincter from one to five o'clock. The solution is injected as the needle is withdrawn to prevent pooling in the tissues.

The needle is reinserted on the left side at the nine o'clock position and about 10 cc. of solution is deposited as described on the right side. The needle is next inserted on the posterior commissure about 1 inch from the anal margin, and 5 cc. of solution is injected into the superficial and deep perianal tissues. The remaining 5 cc. is injected in the anterior commissure in a similar manner. With the injection completed, the entire perianal region is gently massaged to insure an even distribution of the solution. A plug of gauze tape impregnated with warm vaseline is then inserted into the anal canal to stop any oozing of blood. This is always removed in from six to eight hours following operation.

During this period there is occasionally slight to moderate discomfort, and one or two injections of pantopon or morphine may be given. After the rectal plug is removed, there is, as a rule, no further distress, and the operation site remains anesthetized for from four to eight days. Hot sitz

TABLE I. THIRTY-FIVE ANORECTAL OPERATIONS

NAME	OPERATION	EUCUPIN	SEDATION	STOOL	RESULT
1. A. M.	Incision and drainage of perianal abscess	6 cc.	Codeine Gr. 1	2nd day; No pain	Excellent
2. H. E.	Incision and drainage of ischiorectal abscess	10 cc.	None	2nd day; No pain	Excellent
3. R. S.	Excision of external and internal piles	20 cc.	Pantopon Gr. 1	3rd day; No pain	Excellent
4. H. E.	Incision and drainage of anal fistula	10 cc.	None	2nd day; No pain	Excellent
5. M. C.	Excision of external pile and fissure	10 cc.	None	3rd day; No pain	Excellent
6. E. T.	Excision of anal fistula	20 cc.	None	3rd day; No pain	Excellent
7. C. G.	Excision of external and internal piles, crypts and polypi	20 cc.	Morphine Gr. 1/4	3rd day; No pain	Excellent
8. E. S.	Excision of external thrombotic pile	3 cc.	None	2nd day; No pain	Excellent
9. J. F.	Excision of external and internal piles, ulcer and crypts	20 cc.	Morphine Gr. 3/4	2nd day; No pain	Good
10. R. F.	Excision of external and internal piles, crypts, polypi	30 cc.	None	3rd day; No pain	Excellent
11. G. C.	Excision of anal fistula, anal ulcer and crypts	30 cc.	Morphine Gr. 1/4	3rd day; No pain	Excellent
12. L. C.	Excision of anal ulcer, fistula and hemorrhoidal tag	10 cc.	None	2nd day; No pain	Excellent
13. O. C.	Incision and drainage of rectal abscess	25 cc.	None	2nd day; No pain	Excellent
14. O. C.	Excision of anal fistula and anal crypts	30 cc.	Pantopon Gr. 1/3	3rd day; No pain	Excellent
15. J. F.	Excision of anal ulcer, fistula and external pile	15 cc.	None	3rd day; No pain	Excellent
16. R. R.	Excision of thrombotic external and internal pile	5 cc.	None	2nd day; No pain	Excellent
17. E. R.	Excision of anal crypts and polypi	22 cc.	Pantopon Gr. 1/3	2nd day; No pain	Excellent
18. V. J.	Excision of external and internal piles	30 cc.	Pantopon Gr. 1/3	6th day; No pain	Excellent Small slough
19. T. H.	Excision of thrombotic external pile	5 cc.	None	2nd day; No pain	Excellent
20. J. R.	Excision of anal ulcer, internal and external piles	20 cc.	Morphine Gr. 12/4	3rd day; Pain	Poor
21. M. A.	Excision of external and internal piles	32 cc.	Pantopon Gr. 1/3	5th day; No pain	Excellent
22. I. H.	Incision and drainage of ischiorectal abscess	10 cc.	None	3rd day; No pain	Excellent
23. L. B.	Excision of anal polypi	3 cc.	None	4th day No pain	Excellent
24. L. A.	Excision of internal and external piles	30 cc.	None	4th day; No pain	Excellent
25. E. T.	Excision of fistula, external piles and ligation internal piles	25 cc.	None	3rd day; No pain	Excellent
26. O. B.	Excision of thrombotic external pile	10 cc.	None	2nd day; No pain	Excellent
27. L. B.	Excision of internal and external piles	24 cc.	Morphine Gr. 12/4	4th day; No pain	Poor
28. A. L.	Excision of internal and external piles and anal polypi	30 cc.	Morphine Gr. 1/4	3rd day; No pain	Excellent
29. F. P.	Excision of anal ulcer, external and internal piles	30 cc.	Morphine Gr. 1/4	2nd day; No pain	Excellent
30. L. E.	Excision of thrombotic external pile	8 cc.	None	2nd day; No pain	Excellent
31. W. B.	Excision of fistula, internal piles and anal ulcer	30 cc.	Morphine Gr. 1/4	3rd day; No pain	Excellent
32. P. B.	Excision of external pile and rectal polyp	5 cc.	None	3rd day; No pain	Excellent
33. T. V.	Excision of external and internal piles	30 cc.	Pantopon Gr. 6/3	3rd day; Pain	Good
34. M. W.	Excision of external and internal piles, polyp and crypts	30 cc.	Morphine Gr. 3/6	2nd day; No pain	Excellent
35. E. F.	Excision of internal and external piles, polypi and fissure	30 cc.	Morphine Gr. 2/4	4th day; No pain	Excellent

baths for fifteen or twenty minutes three times daily are started the following day and kept up for the next ten or fifteen days. "Surgical" liquids are allowed the first postoperative day, nourishing liquids the second, and a soft diet the third day. Liquid petrolatum, 1 ounce twice daily, is started on the evening of the first postoperative day. Bowel movements consisting of a soft formed stool usually occur on the second or third day after operation and cause little, if any, discomfort. Only 2 patients in this series complained of severe pain; both were highly neurotic. A small superficial slough was observed in the case of an elderly woman on whom an extensive hemorrhoidectomy was performed with the removal of a large amount of tissue. This, however, resulted in no delay in healing.

SUMMARY

1. The postoperative injection of eucupin-procaine solution in 35 consecutive cases of anorectal operation forms the basis for this report.

2. Excellent postoperative analgesia was obtained in all but 2 cases.

3. The duration of analgesia was from four to eight days.

4. Except for one small superficial slough of the skin, no unusual tissue reactions were observed.

5. No toxic or systemic symptoms were noted in any patient.

6. There was no delay in healing.

7. Bowel movements usually occurred on the second or third postoperative day with little or no discomfort.

8. The results obtained in my cases following the use of eucupin-procaine solution have been so gratifying from the standpoint of comfort to the patient that I am encouraged to continue its use as a part of the operative technic.

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316 Exchange Bldg.

SPINAL ANESTHESIA

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TAMPA

Although the cerebrospinal system was described by Magendie[1] in 1825, it was not until 1885 that Corning[2] first utilized this knowledge in producing spinal anesthesia. Since that time it has been investigated by many men, who have made some contribution to the knowledge of spinal anesthesia. The mortality from the use of this form of anesthesia at first was high; it was not the toxicity of the drug but rather its improper use that established the danger. Today it has become one of the safest procedures when used by those skilled in its administration.

PHYSIOLOGY

Spinal anesthesia is produced by introducing an anesthetic agent into the subarachnoid space. The agent then diffuses in the spinal fluid where it comes in contact with the roots of the spinal nerves. The fluid is then absorbed by these nerves. The extent and degree of the anesthesia depends on the rate of diffusion and the concentration of the anesthetic agent in the spinal canal. Anesthesia of the posterior roots is greatest because of their position and greater affinity for local anesthetics. Small injections in the lumbar segment affect the perineum first, then the genitals and the inner surface of the thighs, and finally the soles of the feet. Larger doses cause the anesthetic to spread to the legs and upward from the symphysis to the costal margin. Sensations of pain and temperature are lost first, next tactile sensation and then motor sensation. Shortly after the injection of the anesthetic agent there is a feeling of warmth and tingling of the lower extremities followed by a feeling of heaviness and swelling with a loss of motor power.

DRUGS EMPLOYED

Procaine, marketed under various names such as novocain, neocain, spinocain, gravocain, nupercain and pantocain, is the only drug used in spinal anesthesia that has gained general acceptance. Neocain is used extensively in France. Many surgeons in this country like it for surgery of the head and neck because it has a less profound effect on the higher vital centers. The motor fixation with neocain is very unstable. Spinocain is an alcoholic solution mixed with a nondiffusible agent lighter than spinal fluid. It

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unites with nerve tissue slowly, and the union is prolonged. Gravocain is another nondiffusible anesthetic agent heavier than spinal fluid. It has been used a great deal in operative obstetrics. Both spinocain and gravocain because of their nondiffusible property localize the anesthesia to the nerves around the area injected. Nupercain has been used as a supplement to novocain in amounts of from 5 to 7.5 mg. to prolong the effect of the novocain. Pantocain is novocain to which a butyl radical has been added for the purpose of lessening the specific gravity of the spinal injection through the use of a greatly reduced dose. The dose of pantocain is one tenth that of novocain. Pantocain unites with the nerve roots more slowly, and the union is about twice as long as with novocain.

The most widely used drug in spinal anesthesia is novocain crystals put up in ampules of 50 to 300 mg. When novocain is injected into the spinal canal, it diffuses readily. It has a graded affinity for nerve tissue, which is much less for motor nerves than for sensory nerves. Because of this greater affinity for sensory nerves it unites with them rapidly. The nerve block caused by this union is not stable, and because of this fact novocain is the safest of the drugs used. Other drugs with a slow fixation time and a prolonged block are not as safe. The instability of novocain fixation with nerve tissue is the important and vital factor which permits its use in general spinal anesthesia.

PREOPERATIVE MEDICATION

Some form of sedation is advisable in all patients. The barbiturates can be and are widely used although it must be borne in mind that a small dose makes the patient nervous and a large dose leaves the patient semiconscious. A good rule is to give a fairly large dose of a barbiturate the night before to insure a good night's sleep, and then one hour before operation to give morphine hypodermically with or without atropine. Some operators like to combine morphine and scopalomine, giving them one hour before operation. Any form of preoperative medication is satisfactory if it gives the desired result. A point to remember is that if amytal is used, it may cause shallow and stertorous breathing and a drop in blood pressure.

INSTRUMENTARIUM

Equipment includes one 2 cc. syringe with a twenty-five gauge needle 1 inch long, one 5 cc. syringe with an eighteen gauge needle 2 inches long, two spinal puncture needles, size 20 or 22 with smooth round points that are short and beveled, ampules of novocain crystals of the desired dosage, one ampule of ephedrine novocain, an ampule file, gloves, sponges, sponge holder and an antiseptic, either merthiolate, mercresin or iodine, whichever is preferred by the anesthetist. These are all placed on a Mayo table and kept sterile.

TECHNIC WITH NOVOCAIN CRYSTALS

The patient is turned on his side, the legs are drawn upward and the neck downward. The back is prepared as for surgery and then draped with sterile towels. The spinous processes of the lumbar vertebrae are marked with the thumb nail of the gloved hand. The site selected for injection depends on the type and duration of the operation. At this point the solution of ephedrine novocain is injected. The top of the ampule containing the desired dosage of novocain crystals is removed, and the ampule is placed on the Mayo table ready for use. A spinal puncture needle is then inserted into the spinal canal through the point which was previously injected with the solution of ephedrine novocain. The fluid is then allowed to drop into the ampule containing the crystals, or is collected with the 5 cc. syringe. About 1½ cc. of fluid is collected. The crystals are then dissolved in the solution either by agitation or by alternately withdrawing and expelling the fluid in the ampule. When the crystals are completely dissolved, the solution is drawn up into the 5 cc. syringe by means of the eighteen gauge needle. This needle is then removed and the syringe is attached to the spinal puncture needle, which has remained in the spinal canal. If a greater dilution is required, more spinal fluid may be withdrawn at this time; if not, a few drops may be withdrawn just to insure that the needle is still in the canal. The contents of the syringe are then injected into the canal. To insure that the needle remains in the canal, barbotage may be done. This causes a greater dilution of the fluid and a shorter period of anesthesia. After the fluid has been injected, the patient is turned on his back and allowed to remain in this position for a few minutes. Thus the nerves at the point of injection become anesthetized. The patient is then placed in the Trendelenburg position at an angle of from 10 to 15 degrees to allow diffusion of the anesthetic agent upward.

CAUSES OF FAILURE IN SPINAL ANESTHESIA

The effective use of spinal anesthesia may be hampered by the poor position of the patient on the table, motion during injection and anomalous bony structure. Penetration of the needle into the posterior arachnoid septum, or only partial puncture of the arachnoid, gives a dry tap. The needle may become plugged, or it may penetrate the dura and enter the cord. Pulling the needle partly out during the injection may cause failure. Aspiration of fluid may be difficult because the needle may enter a small pocket containing little fluid. The use of long beveled needles may allow only partial injection of the anesthetic. Resterilization of ampules may cause failure. In a certain percentage of cases desired results will not be obtained proportional to the anesthetist's ability.

EFFECT ON BLOOD PRESSURE AND RESPIRATION

Blood pressure falls because of vasodilatation. The constrictor fibers emerge through the anterior roots of the dorsal and lumbar nerves and pass through the white rami to join the sympathetic ganglions of the thoracic and lumbar chain. The degree of fall in pressure is in direct proportion to the amount of paralysis of the sympathetic nerve supply. The higher the anesthesia the greater the fall and vice versa. Vasodilatation must be prevented as much as possible. The preliminary injection of ephedrine and the utilization of the Trendelenburg position so that the blood may flow by gravity back to the heart are preventive measures.

The effect of spinal anesthesia on respiration depends on the height of the anesthesia. Anesthesia up to the seventh dorsal segment has little if any effect on respiration. If it extends up to the fourth cervical segment, the phrenic nerve as well as all of the intercostal nerves becomes inactivated. Even under these circumstances respiration is still maintained through the sympathetic nerves if the arterial tension has been maintained through the combined use of ephedrine and the Trendelenburg position.

ADVANTAGES OF SPINAL ANESTHESIA

Complete relaxation, which permits faster and more accurate work, is one of a number of advantages of spinal anesthesia. Also the patient is conscious and may help in certain procedures. The brain, liver, kidneys, adrenals, heart and lungs are not damaged. Gas pains and shock are reduced. Postoperative pain is less. Morbidity is reduced. Convalescence is shorter. Liquids may be taken before, during and after operation. The intestines are contracted instead of dilated. Fewer packs are used. The possibility of hernia is reduced. The alkali reserve is less affected. The processes of metabolism and oxidation are normal. The blood urea is only slightly changed. Body cells are at rest, requiring less oxygen and sugar. For the senile patient there is no bronchial irritation. Postoperative bronchitis and pneumonia occur less frequently. There are no after-effects as in inhalation anesthesia. Fewer postoperative catheterizations are necessary. There is no danger of explosion with spinal anesthesia.

DISADVANTAGES

The chief disadvantage in this type of anesthesia is that it requires a constant watch on blood pressure and respiration. Other disadvantages are that the patient is awake and conscious of all that is going on about him and that administration of the anesthetic agent requires one who has been trained and understands the physiology of spinal anesthesia.

INDICATIONS

Spinal anesthesia is indicated in all cases in which complete relaxation is essential, as in fracture and operation upon the rectum, vagina and urethra, in visceral operations and exploration of the abdomen, in the presence of cardiac or pulmonary disease, in diseases of the liver and kidneys, and in diseases of disordered metabolism such as diabetes. In cases of reasonably high blood pressure its use is desirable, but the preliminary administration of ephedrine is omitted. In cases of low blood pressure it may be used providing any further drop is counteracted by ephedrine. It is indicated in cases of deep hemorrhage and in those in which the patient has recovered from hemorrhage. In cases of shock it is desirable only if the shock is relieved by spinal injection. It is of value in cases in which negative abdominal pressure is necessary. In testing for functional intestinal obstruction it is indicated and also in cases of obstruction when there is vomiting and aspiration pneumonia is feared. It is to be preferred in cases of general or local peritonitis, in cases of strangulated hernia or intussusception and in those of emaciation and obesity. It has been used in eclampsia.

CONTRAINDICATIONS

Inexperience and a lack of confidence on the part of the surgeon, and lack of facilities for ob-

taining the Trendelenburg position are contraindications for the use of this form of anesthesia. It is contraindicated in cases in which there are lesions of the spinal cord and brain such as tumor, hemorrhage, syphilis, meningitis or brain abscess, and also in cases of bilateral empyema or collapsed lung as well as in cases of uncompensated heart failure or those in which there is an insufficient heart reserve. In cases of acute or chronic severe anemia, in moribund cases, in cases in which there is a very low blood pressure or a very low hemoglobin content of the blood and in those of septicemia it is likewise contraindicated.

COMPLICATIONS AND MORTALITY

Nausea and vomiting are usually due to psychic causes or to visceral traction. They are relieved by less traction, the application of cold towels, deep breathing, a steep Trendelenburg position, and the administration of ammonia, oxygen or epinephrine.

Vasomotor paralysis should be prevented by the preliminary administration of ephedrine, but if it occurs, it is treated by the use of epinephrine, a steep Trendelenburg position, oxygen and saline solution administered intravenously. Respiratory paralysis occurs when the anesthetic agent diffuses up to the fourth cervical segment. Artificial respiration must then be given. Palsies and paralysis have been reported, but they are observed rarely. Occasionally an ocular palsy occurs due to a meningismus, but it clears up quickly. Paralysis of the feet, toes and sphincters is not due to the anesthetic, but to injury to strands of the cauda equina. This can be prevented by the use of small, smooth, round, beveled needles. Meningitis is a rare complication. It occurs only when asepsis is not complete, or when the skin over the site of puncture is infected. Meningismus may be due to chemicals, but is usually caused by blood in the spinal canal. Rest and removal of the blood give relief. Intracranial shock is caused by intracranial hemorrhage or tumor and does not occur if a proper history is taken and if the small volume technic is used. Herniation of the medulla into the foramen magnum occurs only if large amounts of fluid are removed. Headache is usually due to escape of fluid into tissue. It can be prevented by proper technic and needles. When it occurs, it is treated by the use of the Trendelenburg position, fluids administered intravenously, ephedrine, spinal drainage or narcotics.

Postoperative urinary retention can be prevented by the use of an indwelling catheter for several hours after the operation. It is treated by infrequent catheterization.

Shock owing to lumbar puncture and death are seldom observed. They do not occur if the contraindications to spinal anesthesia are heeded. At the present time figures pertaining to the mortality rate for spinal anesthesia limited to the subdiaphragmatic areas show that death occurs in 1 case in from 7,000 to 10,000 cases.

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MULTIPLE MYELOMA

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Multiple myeloma owes its clinical entity as a disease to the finding of the Bence-Jones bodies in the urine in 1845. Sir James Watson[1] observed that the urine of one of his patients would almost solidify on heating and then with continued heating become liquid again. He sent a specimen to Sir Henry Bence-Jones,[2] who found the odd reaction was caused by the presence of an oxide of albumin. A year later Dalrymple[3] discovered that the disease had its origin in the cancellated structure of bone. Rustizky[4] in 1873 gave the disease its present name. The first description of multiple myeloma in connection with the excretion of Bence-Jones protein bodies in the urine was written by Kahler[1] in 1899. Years later Wright[1] discovered that the tumor cells of the bone marrow involved were plasma cells.

According to Wallgren,[2] only 66 cases of multiple myeloma were reported in the literature for the years 1873 to 1920. In 1928 Geschickter and Copeland[5] noted from a complete review of the literature that 424 cases were reported during the period from 1848 to 1928. Ghormley and Pollock[1] mentioned 86 true cases for the period from January 1924 to January 1937. Life insurance statistics[6] give the incidence of this disease as 0.03 per cent of all malignant growths. Rosenthal and Vogel[7] reported that since the use of the sternal puncture for diagnostic purposes its

incidence has greatly increased. They substantiated this conclusion by the statistics of Mt. Sinai Hospital. Only 3 cases were reported there from 1916 to 1935. This number is in strong contrast to the 13 cases observed during the next two and one-half years, all of which were diagnosed by sternal puncture.

The cause of multiple myeloma is unknown. The report of a case of this disease that came to autopsy follows.

REPORT OF CASE

J. K., a white married man aged 32, was admitted to the surgical service of St. Francis Hospital on April 5, 1940. He related that while in swimming a few days previously, as he had opened his arms to pull himself under the water, he had felt a snap in the back of the neck, which was followed by a dull ache. A chiropractor had examined him and had apparently treated the lower part of the back. As no relief from the dull pain followed, after several days he came to the emergency room of the hospital for treatment.

Roentgen examination revealed a compression fracture of the fourth cervical vertebral body. The patient was placed in traction, and a five pound weight was applied. The following day a cast was applied immobilizing the region of the neck. On June 19 he was discharged wearing a metal neck brace.

The patient apparently grew weaker and was readmitted on August 10. He stated that on three or four occasions he had experienced severe pain in the stomach at night as he was retiring and twice had vomited bile. Upon examination at this time, he related that about nine months previously he had fallen a distance of about 12 feet from a ladder, his right shoulder receiving the brunt of the blow. On close questioning he mentioned having had a bloody diarrhea for two or three days while in the hospital the first time, and he supposed he had had about four or five evacuations, losing a considerable quantity of bright red blood. The surgeon had attributed the bleeding to a small fissure in the rectum and believed little blood was actually lost.

Inspection revealed a thin, short man with small bones. He was weak and anemic in appearance; he looked as if he were suffering from some chronic ailment. There were tenderness and deformity over the fourth cervical vertebral body as a result of the fracture four months previously. The chest was moderately well developed. The manubrium of the sternum was depressed with its lateral margins flaring upward, presumably as a result of rickets in childhood. Although examination of the upper extremities revealed nothing unusual, the grip of the left hand was weaker than that of the right. The patient stated that the whole left upper extremity felt weak. There was moderate edema of the ankles that disappeared on elevation. The knee jerks were hyperactive. Roentgen examination of the cervical fracture gave no evidence of healing.

The patient was given a diet to correct the anemia and received a special drink containing vitamins and liver extract three times daily. As he experienced a severe reaction following gluteal injections of reticulogen, iron cacodylate given intravenously was substituted. On two occasions three days apart he received 250 cc. of citrated blood. The response caused an increase of the red cell count to 2,680,000 and of the hemoglobin to 52 per cent. In the meantime occult blood had been discovered in the stool. A gastric analysis gave no evidence of blood, but absence of free hydrochloric acid was noted. A roentgenogram of the stomach gave rather pronounced indications of a carcinoma. It also showed great rarefaction of the first lumbar vertebral body. About



Fig. 1. Compression fracture of fourth cervical vertebral body.

this time the patient complained of a pain across the ribs in the sixth intercostal space on the left side.

In view of these findings a carcinoma of the gastrointestinal tract had to be considered. Judging from the roentgen studies there was a growth of this nature in the stomach. The clinical evidence that indicated its presence there included the finding of occult blood in the stools, the absence of free hydrochloric acid in the gastric secretion, the meager story of three or four gastric upsets and, strongest of all, the roentgen indications. Against this diagnosis was the fact that gastric lavage revealed no blood in macroscopic or microscopic tests, nor had vomiting of blood or other vomiting occurred while the patient was in the hospital, except during the first roentgen examination. The plyoric end of the stomach could not be felt, but no masses were palpable. There were no indications of the gallbladder or the liver being involved through metastases. The cervical anterior lymph nodes on the left side could hardly be discerned. The posterior cervical lymph nodes were not palpable, nor were the inguinal lymph nodes, but apparently there was definite metastasis to the ribs and vertebral bodies. It would be unusual for a cancer of the stomach to metastasize to bone to the degree indicated and yet fail to affect other organs in this period of time.

Another diagnosis that had to be ruled out was carcinoma of the ascending colon. This is usually insidious in onset and causes a definite anemia with a red cell count of about 2,000,000 and a hemoglobin estimation of approximately 40 per cent. The history of the hemorrhage of bright red blood from the bowel suggested this possibility, and metastasis to the skeletal system was in keeping with this diagnosis. The fact that the patient was more or less constipated was of no great significance. Roentgen studies, made after the giving of a barium enema, gave no evidence of a tumor in this region.

The pain over the rib became more severe. Strapping the chest over this region gave little relief, and this measure was discontinued. A roentgenogram showed an expansile tumor on the left side around the sixth rib near its sternal end. Cerebral irritation was becoming evident at this time. The patient seemed to be only partly conscious of his surroundings, and a little later it was necessary to restrain him in bed.

The patient was given two more transfusions, but seemed to benefit little from them. On August 28 a biopsy was performed upon the rib. The mass was found to be attached to the pleura, and in removing it an artificial pneumothorax resulted, but the patient recovered enough to be removed to his room. Here he was treated for shock and he gradually improved. The pathologist reported a diagnosis of multiple myeloma. The question then arose as to whether or not the patient was suffering from two processes, multiple myeloma and carcinoma of the stomach.

He recovered from shock, but coarse rales and bronchial breathing developed shortly afterward. He was given two rectal infusions of sulfapyridine with good effect on the pneumonic process. The cerebral irritation was so increased that he became unmanageable and an attendant was necessary. A rhythmic tremor of both arms developed. As the intake of fluids was negligible, he received intravenous injections of 1,000 cc. of a five per cent solution of glucose in normal saline twice daily.

Lumbar puncture was resorted to on September 8 in an attempt to allay the great degree of restlessness. The manometer reading was 16 mm. with the patient in the prone position. There was no blockage. About 20 cc. of spinal fluid was obtained in a short time. This measure had a beneficial effect for about twenty hours. The pulmonary symptoms grew more acute, however, and coarse bubbling rales were heard in both lungs. The breathing was labored, and the condition of the patient became critical. Sedation was ordered as needed to keep him comfortable until he expired on September 9.

SUMMARY OF AUTOPSY FINDINGS

Abdomen. As one approached the descending colon a definite constriction or narrowing of the lumen was noticeable. The spleen was relatively small and adherent to the stomach by means of adhesions. The kidneys were rather irregular in shape, lobulated and surrounded by dense fatty perirenal tissue. The capsule peeled easily, but the center of the kidney seemed to be peculiarly marked.

Thoracic Cavity. At the site of the incision, which was entirely closed, a serosanguineous exudate was observed. The pericardium contained about 200 cc. of clear fluid. There were several septal striations partitioning it, and it had a roughened spongelike appearance similar to that of the tongue of a dog. The right pleural cavity contained little or no fluid. The left lung showed hypostatic or bronchopneumonic changes while the right lung was relatively free.

Spine. The fourth lumbar vertebra was located, and a small piece of the body was chiseled out. The chisel fell easily through the anterior part, and a definite metastatic tumor was found.

Skull. The parietal skull on the right side at the frontoparietal suture line was of paper thinness in an area about 4 cm. in diameter. There was erosion to a depth of .5 cm. in this area caused by a dark red, marrow-like, fungating, gelatinous mass, which was limited to the interior of the skull and was fused to the dura. The right cerebral portion of the brain was only depressed and not involved in the process. The brain was wet and weighed 1,300 Gm.

In view of these findings and the results of special study of various specimens, a pathologic diagnosis of multiple myeloma was made.



Fig. 2. Roentgenogram of stomach with indications of carcinoma. It also shows great rarifaction of the first lumbar vertebral body.



Fig. 3. Roentgenogram showing expansile tumor on left side around sixth rib near its sternal end.

Multiple myeloma is essentially a disease of later life. Approximately 80 per cent of all cases occur between the ages of 40 and 70 with the highest incidence at 55 years. There have been only 4 proved cases reported in adults under the age of 35. Three cases have been reported as occurring in children, but there is some doubt regarding the accuracy of diagnosis in these cases. Thus, the case here presented, in which the patient was 32 years old and in which the disease was microscopically verified, is the fifth case recorded in which the patient was under 35 years of age.

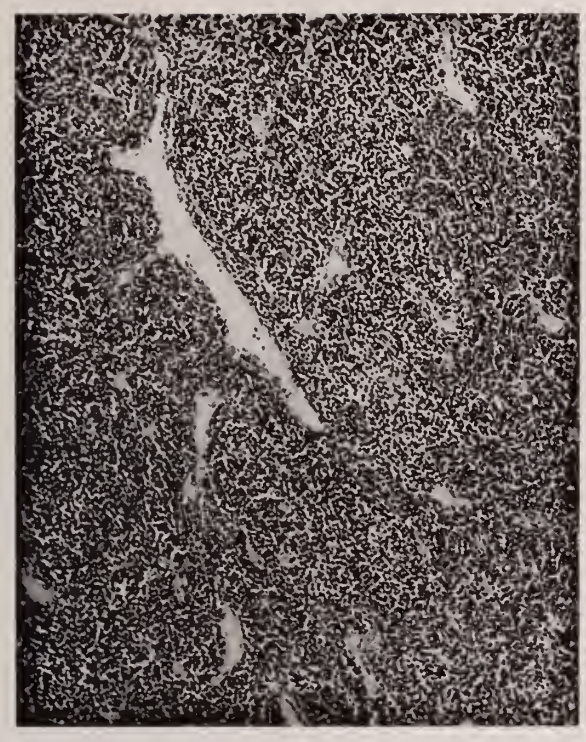


Fig. 4. Hemotoxylin and eosin stain of section of the myeloma.

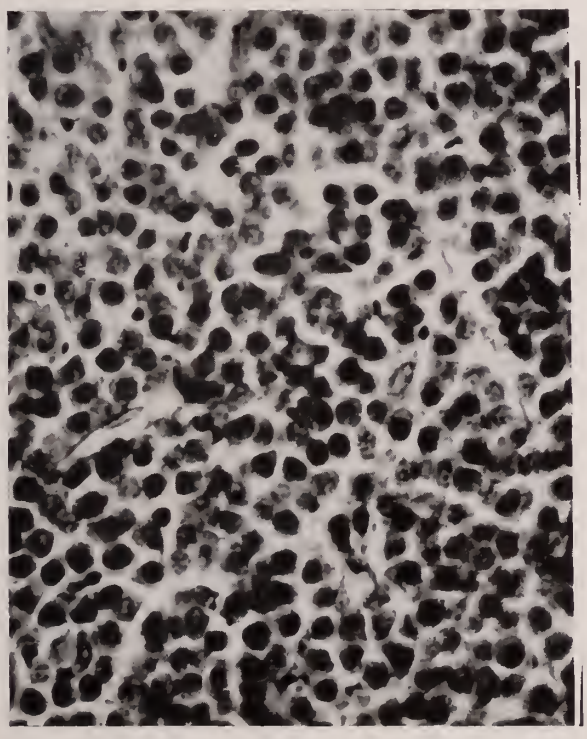


Fig. 5. Iron hemotoxylin stain showing plasma cells in various stages of maturity. Note the eccentrically placed nucleus (x670).

CLINICAL CHARACTERISTICS

Pain. Throughout practically all of the literature pain is given as the outstanding symptom. Initially it is vague and indefinite but it is supposed to be typical in its features later in the course of the disease. Geschickter[5] classified the pain in five stages that he believed typical. The patient in my case had little or no pain except for a short period following fracture of the cervical vertebra when he had a stiff neck.

Tumor. Frequently a tumor is the initial symptom that calls attention to the disease. In 13 of 40 cases reported by Batts,[6] it was one of the presenting symptoms. The distribution and multiplicity of the tumors are cardinal points. Five cases only have been reported with a single focus, and there was no autopsy in these cases. In 90 per cent of all cases there is tumorous involvement of the ribs, sternum and spine. In 40 per cent there is, in addition, involvement of the skull or the extremities about the shoulder or pelvic girdle. It is usual for the sites of the tumors to be extremely painful. In my case there was involvement of the spine, a rib and the skull, but without associated pain.

Deformity. It has long been recognized that deformity is an accompaniment of multiple myeloma but its distinctive peculiarities have not been emphasized. In 60 per cent of all cases thoracic deformities occur, and if the deformity extends to the limbs, it is confined to the region of the girdle. Geschickter and Copeland[5] described a typical sinking in of the gladiolus of the sternum and a parasternal rosary due to a multipicity of small tumors situated parasternally along the ribs and clavicle. Flattening of the lumbar curve, dorsal kyphosis and actual telescoping of the spinal column commonly occur. In the case presented the patient had a sinking of the upper part of the gladiolus of the sternum with a flaring upward of the lateral margins. It was attributed to a probable case of rickets in childhood, but in reality it was caused by the disease.

Fracture. In no other tumor of bone does fracture occur to such a degree. Bloodgood[8] in a study of pathologic fracture reported an incidence of 25 per cent. Geschickter and Copeland[11] recently observed that 62 per cent of pathologic fractures occur in cases of multiple myeloma.

While a pathologic fracture is not infrequently the cause of the first symptom, it is less frequently recognized as an initial sign of the disease. Wallgren's[6] case was diagnosed clinically as exudative pleurisy. At autopsy fracture of

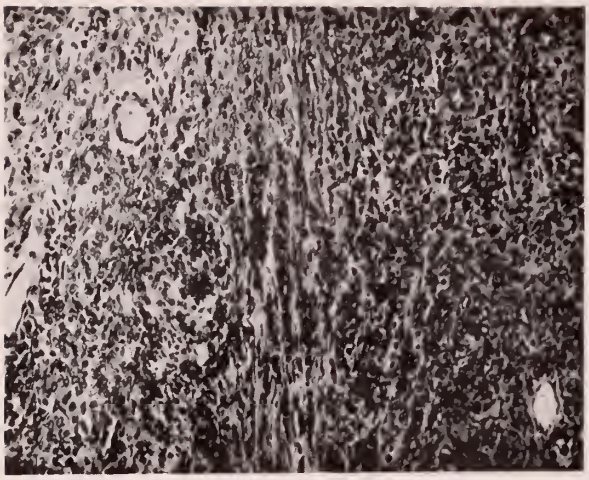


Fig. 6. Hemotoxylin and eosin stain. The cellular tissue is subdivided into irregular islands by septa of dense connective tissue.

the fifth rib was discovered. In the first of the cases reported by Geschickter[5] an early symptom was pain from fracture of a rib, which was not discovered until a year later by careful roentgen study. In my case the fracture was the presenting symptom. It was diagnosed as a fracture and attributed to a dive into shallow water. The patient had not dived, and the fracture was a pathologic one.

The distribution and multiplicity of the fractures are unique. Bloodgood[8] noted that in other pathologic fractures the involvement is almost exclusively of the long bone of the extremities. In contrast, in this disease it is in the trunk. The prevailing location is in the ribs. In the case presented it was in the fourth cervical vertebral body. In other diseases of bone repeated fractures are often encountered in the same bone. In this disease, however, one may observe the occurrence of fracture in several different bones. While both united and ununited fractures occur, no reunion was obtained in my case.

Pulmonary Changes. Chronic bronchitis and emphysema are common in the cases in which there is thoracic deformity. In 55 per cent of all cases deformity of the chest occurs. The patients in cases of this type are in a debilitated, cachectic condition. They have hypostatic pulmonary changes caused by their bedridden state and restricted alveolar ventilation because of painful breathing, factors that contribute greatly to bronchial involvement. Various forms of pleurisy have been reported, and at autopsy deformities of the ribs owing to fracture were found to account for the pleural involvement.

Characteristic pulmonary changes are well illustrated in the case described. Pain in the pleural region developed; later an expansile tumor of the rib formed in this region. Bronchitis developed. The tumor was removed; artificial pneumothorax and collapse occurred. The patient recovered only to succumb to a terminal pneumonia.

Neurologic Manifestations. Neurologic symptoms soon manifest themselves in this disease. Since the bony framework is the natural defense for the nervous system and since it is the point of attack in this disease, they are to be expected. Paraplegia following involvement of the vertebral column is frequent. It, of course, is caused by compression of the spinal cord. Dwindling sexual appetite, trouble in starting the flow of urine and weakness of the legs are early symptoms.

The patient in the case here reported did not experience paraplegia even though the tumor was first found in the vertebral column. Mental changes did occur. They were first made manifest by restlessness and irritability, which made it difficult to keep the patient in bed. Another sign that was probably from spinal pressure was weakness in the left arm. It was insidious in onset and moderate in degree. Late in the course of the disease, there were pronounced signs of cerebral involvement. The condition of the patient would vary from a comatose state to wild delirium and it was difficult to control him. A spinal puncture was done the day preceding his death. The fluid was under increased pressure (16 mm. in the prone position), and about 20 cc. was removed by the gravity drip method. He was not rational for four days preceding his death.

Nephritis. Hammond[7] was of the opinion that chronic nephritis with nonprotein retention and low blood pressure is typical of multiple myeloma. Geschickter[5] observed 4 cases in which hypertension rather than hypotension was present. Usually nephritis of the chronic type is associated with this disease. Gottardi[5] described a case in which the first symptom observed was intermittent hematuria. In my case there was a persistent hematuria. There was at no time more than a trace of albumin. The nonprotein nitrogen was 70.5 mg., and the urea nitrogen was 28.2 mg. per hundred cubic centimeters. The Bence-Jones test gave negative results even after a section of rib had been removed

and diagnosis had been made by microscopic examination. Indeed it was felt that the elevation of nonprotein nitrogen and urea nitrogen resulted largely from the toxic state of the patient rather than from specific nephritis. The role of Bence-Jones protein bodies in the urine is still in debate. Decastello[5] concluded that a previous nephritis was necessary for their excretion. Stovis[5] claimed to have caused nephritis by the injection of these bodies. There is no single theory for the origin of the nephritis that occurs in these cases. In some cases Bence-Jones protein bodies have been reported in the urine unassociated with the albuminuria usually expected. These bodies have been mentioned in 65 per cent of all cases reported. Their presence does not clinch the diagnosis as it has been reported in 12 different diseases, in all of which, however, the bone or bone marrow was involved.

Blood Changes. In only 16 of 70 cases was the red blood cell count over 4,000,000. An anemia with the red blood cell count ranging between 2,000,000 and 3,000,000 occurs most frequently. In my case the count was approximately 2,000,000.

The white blood cell count varies from a leukopenia to normal to a leukocytosis. The unusual feature is the differential count. In 15 cases out of 60, this count showed myelocytes ranging from 1 to 10 per cent, and in 5 cases eosinophils ranging from 3 to 5 per cent. In my case no myelocytes were observed in four differential counts. Two per cent eosinophils were reported in one count. In 38 per cent of one series of cases a high hemoglobin content was noted. In my case it was uniformly low. Also, normoblasts and megaloblasts, which are consistently present, were lacking. The blood picture was the upsetting feature when the patient was first admitted to the medical service. Classifying the anemia caused concern.

From this survey it appears that the blood picture may simulate that of primary anemia with displacement of hemopoietic tissue by tumor elements, or it may correspond to that of secondary anemia with features resembling those of malignant disease. Either condition may predominate and give the blood picture a variable character.

Gastrointestinal Symptoms. In the case described the gastrointestinal symptoms were particularly important. Occult blood was found in the stool shortly after admission of the patient to the medical service. It persisted throughout the course of the disease and was a leading factor in causing consideration to be given to cancer of the intestinal tract as a possible diagnosis.

In most studies, intestinal symptoms are classed as part of an enterocolitis that appears as a terminal complication. Melena, epistaxis and hematemesis are frequent terminal manifestations associated with a lowered platelet count in the advanced stage of anemia. Unfortunately in my case no platelet count was obtained Gastric analysis has been made but rarely, and in the few instances recorded there was usually an absence of free hydrochloric acid. Metastasis of the tumor to the stomach and duodenum was reported by Renji,[5] Martelli,[5] and Morse.[5] In my case free hydrochloric acid was absent in the gastric juice, and blood was present in the stool. Roentgen examination of the stomach filled with barium indicated that it was involved, but postmortem examination failed to verify this observation.

Roentgen Examination. Roentgen studies are typical and are helpful in making a diagnosis. The lesions are characteristically multiple, and in general they are confined to the location of the red bone marrow. Thus they are located centrally in the roentgenograms. Since they are bone-destructive, the skeletal lesions show up as rounded punched-out areas varying in size from a pea to an orange. The ribs, if affected, are usually mottled. At the site of the costochondral junctions there is a tendency for the tumors to appear as areas of bone absorption. Pathologic fracture of the ribs occurs most frequently from the fifth rib down to the twelfth. In my case the sixth rib on the left side was involved, and roentgen studies showed an expanded and rarefied mass.

When the skull is involved, usually multiple punched-out areas, confined to the frontal and upper parietal bones are observed. In my case these changes were noted in the frontoparietal region on the right side at postmortem examination.

Calcium and Phosphorus. Hypercalcemia with normal or slightly elevated serum phosphorus is the rule; however, hypercalcemia with low phosphorus content of the serum may occur. This latter is typical of hyperparathyroidism and may cause some confusion. The calcium con-

tent in my case was 7.5 mg. per hundred cubic centimeters of serum. This estimate is low and not readily explained.

PATHOLOGIC CHANGES

MacCallum[8] described two types of myeloma, (1) the lymphoid or plasma cell type in which the cells are nongranular and mononuclear with basophilic cytoplasm and (2) myeloid myeloma in which the cells correspond to myeloblasts although occasionally they are demonstrated as myelocytes or even erythroblasts. There are two conflicting views regarding the histogenesis. Some believe the cells are various forms of plasma cells derived from the supporting tissues of the blood vessels of the bone marrow. Others believe the cells arise from the blood-forming elements. If the disease is regarded as a hypertrophic tumor of the hematopoietic system, each tumor, skeletal or extraskeletal, can be regarded as a primary growth arising from the same sort of stimulus. There are many writers, however, that regard extraskeletal tumors as examples of true metastasis, but they are in the minority.

PROGNOSIS AND TREATMENT

The prognosis is hopeless. The average duration of the disease is two years after its discovery. Roentgen-ray treatment has been reported as causing remissions, but remissions also frequently occur spontaneously. Since not one proved case has been reported cured, it is evident that only palliative treatment can be offered. The patient in my case was first seen on April 5 and died on September 9, 1940, after an interval of five months and four days.

SUMMARY

A case of multiple myeloma is reported in which the noteworthy features include a presenting symptom of pathologic fracture, the necessity of biopsy for definite proof, the multiplicity of tumors that occurred and the effect of the disease on the different systems. The conclusions resulting from the study of this case are:

1. Multiple myeloma is a rather rare neoplastic disease attacking primarily the tissue of the bone marrow. Its involvement is multiple. Metastasis is rare and questionable. The cells of the growth are plasma cells of myeloid origin.

2. Multiple myeloma is the most frequent cause of pathologic fracture, and it should always be considered in cases of this type.

3. Diagnosis should be relatively easy once the disease is considered. Diagnostic methods include: (a) Biopsy of an involved portion of bone. Diagnosis by this method is reasonably certain if cells typical of myeloma are present in the specimen. (b) Roentgen examination is one of the most important methods although the radiologist may not be able to differentiate between myeloma and metastatic carcinoma. (c) Sternal puncture. This procedure may reveal the characteristic cells even though the sternum is not grossly involved. (d) Hypercalcemia with normal or high content of phosphorus in the serum distinguishes the disease from hyperparathyroidism. (e) Bence-Jones proteinuria, although present in only 65 per cent of the cases of multiple myeloma and occasionally present in other disease, is strongly suggestive of this disease.

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SOUTHERN MEDICAL ASSOCIATION TO HOLD WAR MEETING

Since the press release by the Defense Transportation Director in Washington in June, on the cancellation of all "nonessential" conventions, the Southern Medical Association has received many inquiries upon the status of the plans for the annual meeting in Richmond in November.

The officers of the Southern Medical Association believe that this annual meeting is in no sense a nonessential convention. It should be of definite service to the Government and the people as was the comparable meeting twenty-five years ago during World War I. There are many physicians in the South who will have to broaden their civilian practice next year, will have to do medical work that they have not done in years. In Richmond they will be furnished an opportunity to freshen up in expanded fields, and this will mean better service to the civilian population. Physicians in military service in this part of the country also will be able to discuss medical problems of the armed forces, which demand continuous study. The civilian population must replenish the military branches in any prolonged war, and must be kept in readiness for its duties.

The Association, through the member of its Council in the District of Columbia, Dr. Oscar B. Hunter, has been in contact with the Surgeons General of the Army, Navy and Public Health Service in Washington, that is, Dr. James C. Magee, Dr. Ross T. McIntire and Dr. Thomas Parran. All three indicate that they believe that the Southern Medical Association meeting can make a significant contribution to the war effort. Richmond has been described as a strategic location for this gathering. Just as the American Medical meeting in Atlantic City in June was helpful to military organization and current necessary medical progress, so the Southern Medical in Richmond this fall will contribute to the national need. It is important that medicine not be frozen for the duration of the war. It is believed that the Richmond gathering has the endorsement of official medical Washington, and that no objection will be raised to it from any other quarter.

Section officers and all who are charged with program responsibilities are going ahead in the building of their programs. The activities this year will occupy three days instead of four, and will be confined to Tuesday, Wednesday, and Thursday, November 10, 11, and 12. Hotel reservations already made indicate that the attendance will be good. Hotel reservations should be made through the Hotel Committee, Southern Medical Association, 109 North Fifth Street, Richmond, Virginia.

WINNING THIS WAR IS MOST IMPORTANT SINGLE OBJECTIVE EVER PLACED BEFORE MEDICAL PROFESSION OF THE UNITED STATES

Pointing out that there is a distinct disparity between the applications from physicians coming through various routes directly to the Office of the Surgeon General of the Army, to the Air Force and to the Navy and the number that ought to be immediately available to meet our war needs, The Journal of the American Medical Association, in its July 25 issue, says:

> Let us realize that the winning of this war is the most important single objective ever placed before the medical profession of these United States and give to our nation the same complete, wholehearted, voluntary service on which the nation has learned to depend in the past.
>
> As has been indicated previously in The Journal, many of the states have already given to the armed forces almost every physician that can be spared now. Some of the larger states must supply the personnel necessary for the immediate demands. Elsewhere in this issue . . . is notation of the establishment in several states of additional recruiting boards which are designed to aid the work of the Procurement and Assignment Service for Physicians, Dentists and Veterinarians.
>
> The letter circulated by the Procurement and Assignment Service has brought to the headquarters of that organization great numbers of return postal cards which indicate that many physicians have volunteered and are volunteering in response to the latest appeal. Nevertheless there is a distinct disparity between the applications

coming through various routes directly to the Office of the Surgeon General of the Army, to the Air Force and to the Navy and the number that ought to be immediately available. Certainly the situation is not satisfactory when the armed forces are without a reserve pool from which to draw for an emergency. Everything possible is being done that can be done to hasten action on the applications of physicians through recruiting boards or directly through the Offices of the Surgeon Generals. The drive must continue, however, until some thousands of doctors have been commissioned who will be available for any contingency that may arise.

Again and again The Journal has pointed out that the needs of the armed forces will require that every physician under 45 years of age and physically fit who has not been stated by his state board of procurement and assignment to be engaged in an essential occupation must be made available to the armed forces. The Selective Service Act makes available to the armed forces every male citizen in the United States under 45 years of age. The physician who waits for the draft to pick him up certainly is in an unenviable light before his profession but even more in his own self respect. Little is to be gained by hesitating or holding back until the call comes, as it eventually will have to come from the boards of the Selective Service if the needs of the armed forces are not satisfied.

The Procurement and Assignment Service for Physicians, Dentists and Veterinarians was developed to aid the medical profession in determining for itself equitable distribution of medical service during the emergency. By utilizing its facilities, hospitals are being enabled to retain essential members of their staffs, industries are being enabled to retain necessary physicians and medical schools are being enabled to hold a sufficient number of their faculties to continue medical education. Everything possible is being done to enable individual communities to retain enough physicians to provide needed medical services for the civilian population. If, however, the armed forces do not get the medical personnel that they require the civilian population might be compelled to yield physicians who are doing their utmost to maintain civilian health.

MEDICAL OFFICERS NEEDED

To fill appointments for rotating internship and for psychiatric residents in St. Elizabeth's Hospital, federal institution for the treatment of mental disorders in Washington, D. C., the Civil Service Commission will accept applications for Junior Medical Officers until the needs have been met. The positions pay $2,000 a year.

The rotating internship consists of 1 year of rotating service including medicine, surgery, psychiatry, laboratory, pediatrics (affiliation), and obstetrics (affiliation). Appointments are made on July 1 and January 1 of each year. Applicants must be fourth year students in a class A medical school. A postgraduate internship of 1 year in psychiatry (psychiatric residents) is offered to graduates in medicine who have already served or are now serving in an accredited rotating internship. Proof of completion of the internship must be shown before entrance on duty. No written test is required and there are no age limits.

COURT OF APPEALS AFFIRMS CONVICTIONS

On June 15, 1942, the Court of Appeals, speaking through Associate Justice Miller and with the concurrence of Associate Justices Rutledge and Martin, affirmed the judgments convicting the American Medical Association and the Medical Society of the District of Columbia of violating the Sherman Anti-Trust Act.

While a multitude of questions were raised on the appeal, the Court saw fit to discuss only a few of the propositions of law involved.

In view of the recent decision of the Supreme Court in Apex Hosiery Company v. Leader, 310 U. S. 469, which is now generally considered as greatly limiting the field and scope of the Sherman Act, the Court of Appeals construed the charge in the indictment quite differently than it did in its first opinion. The Court said: "If a conspiracy was shown, the purpose of which was to restrain competition, raise prices or otherwise control the market, to the detriment of purchasers or consumers of medical or hospital services, by destroying or injuring Group Health Association, it was sufficient to sustain the conviction."

In order to make this rule applicable, the Court adhered to its former ruling, holding the practice of medicine was a "trade" and that the interrelated activities of the hospitals and Group Health Association in making available and financing medical services also constituted "trade" under the Sherman Act.

After this conclusion the Court proceeded to discuss whether or not the provisions of the Clayton and Norris-LaGuardia Acts covered the dispute over employment by Group Health Association of members of the profession and precluded this prosecution under the principles laid down in United States v. Hutcheson, 312 U. S. 219.

Oddly enough, while admitting that the professional or pseudoprofessional groups closely resembled or might even be doctors' or lawyers' "unions," the Court held that to apply the Acts would be to cast medical doctors in the role of laborers. The Court then drastically limited the scope of the Clayton and Norris-LaGuardia Acts and held that they included only disputes of working men, wage earners or laborers on one hand, and aggregated capital on the other.

Following out this argument, in disregard of the fact that it had already held a doctor to be in trade and a tradesman, the Court concluded that a physician is not a workman or laborer and his compensation is not wages. Hence, the Acts were not intended to cover the controversy as it exists in the present case. This drastic curtailment of the scope of the Clayton and Norris-LaGuardia Acts seems to ignore the fact that the Acts cover not only trades but any industry, craft or occupation. It is hard to conceive how a doctor can be in trade and at the same time not be in trade or in an occupation.

Next, while admitting that the Court had held in its former opinion that "any justification for the restraint, so as to make it reasonable as a regulation of professional practice . . . . must be shown in evidence as a defense," the Court brushed that ruling aside with the statement that any regulatory acts on the part of physicians, in the absence of an express delegation of power from the legislature, which injured others, amounted to restraints upon competition. In this aspect of the opinion, the Court made it plain that the activities of other professions, such as the practice of law, are subject to prosecution under the Sherman Act, if the rules and regulations of the legal or other professions "impose unreasonable restraints."

While the Court in its first opinion seemed of the opinion that the illegality of the activities of Group Health Association was relevant to the issues involved and might be a defense to the charge of restraint, because the Court discussed the merits of the contention at length in that opinion, it now concludes that even

illegal activities are entitled to the protection of the Sherman Anti-Trust Act, the theory of the Court being that if people combined to prevent the commission of a criminal activity, which is "trade" under the Sherman Act, they may be indicted and convicted for a violation of that Act. The Court argued that the prevention of illegal activities is "extra-legal" and belongs to the legislature and not to the citizen.

In upholding the admission in evidence of activities of the American Medical Association throughout the United States antedating the conspiracy period described in the indictment, even against the Medical Society of the District of Columbia, the Court said such "evidence was admissible as bearing on the intent of the Association in respect of the actions which are the subject matter of the indictment," and that it made no difference that the activities were legal when and where performed.

Lastly, the Court discussed the anomalous verdict of the jury convicting two inanimate corporations of a conspiracy, which is essentially a crime of intent, without the intervention of any human agents. It is difficult to conceive how a corporation can enter into a contract of conspiracy involving a "specific criminal intent" without acting through human agents. The problem, however, presented no difficulty to the Court which stated that "the fact that a corporation can act only by human agents is immaterial" and "the conviction of appellants does not depend upon the guilt . . . . of their agents."

In a blanket statement, the Court concluded its rather startling opinion with the sweeping ruling that all other contentions raised by appellants were "without merit" and affirmed the verdict of conviction.

In the next thirty days the American Medical Association and the Medical Society of the District of Columbia will file a Petition for a Writ of Certiorari with the Supreme Court of the United States, seeking a review of the decision and judgment of the Court of Appeals.

(Signed) Warren E. Magee

From Medical Annals of the District of Columbia 11:272-273 (July) 1942.

DISTRICT MEETINGS CANCELED

The four district medical meetings scheduled to be held in Tallahassee, Ocala, Sarasota and Miami during October have been canceled.

The Council recommended this cancellation to the Board of Governors, and the recommendation was approved by that Board. The councilors and the members of the Board of Governors feel that it would be unwise to hold the district medical meetings this year, since so many physicians are in military service, or are planning to enter service. Furthermore, doctors who are not in actual military service are carrying a double burden. Transportation is another problem; also there is a general feeling of uncertainty which would make it difficult to concentrate on a scientific medical program under present conditions.

MEDICAL LICENSES GRANTED

Dr. W. M. Rowlett, secretary of the State Board of Medical Examiners, reports that 81 of 87 applicants passed the State Board examination held in Jacksonville on June 22 and 23. Licenses have been issued to the following physicians:

Atkinson, Horace D., Orlando (Emory, 1942)
Averill, Roy S., Jacksonville (Western Reserve, 1940)
Avery, Edw. S., Winston-Salem, (U. of Pa., 1928)
Bernstein. Clarence, Winter Park (Johns Hopkins, 1931)
Branca, Henry E., Miami (N. Y. Med. Coll., 1941)
Brown, DeWitt C., Jacksonville (L. I. Coll. 1933)
Carroll, Charles H., Miami Beach (Yale, 1912)
Cato, Turner E., Miami (U. of Tenn., 1928)
Cline, Abe, Pensacola (Indiana U., 1921)
Coleman, Ralph R., Charleston (S. C. Med., 1941)
Coleman, Hubert W., Jacksonville (U. of Ga., 1940)
Collins, Grover C., Gainesville (U. of Tenn., 1941)
Cowan, Zachary S., Atlanta (Emory, 1917)
Douglas, Russell V., Weirsdale (Emory, 1942)
Enzor, Allen A., Crestview (Tulane, 1941)
Farley, Harriet G., Bushnell (Rush, 1940)
Feinberg, Edgar L., Tampa (Tulane, 1942)
Ferrell, John P., St. Petersburg (Emory, 1942)
Foraman, Forrest H., Miami (U. of Iowa, 1942)
Futch, William D., St. Petersburg (Tulane, 1942)
Gibson, I. M., Emory Univ., Ga. (Chicago U. 1941)
Grable, Theodore J., St. Petersburg (Tulane, 1942)
Hawley, Chapin, Cincinnati (U. of Va., 1942)
Hoare, Francis C., Boston (U. of Va., 1942)
Hodnette, Frank B., Atmore, Ala. (Tulane, 1942)
Horton, Samuel H., Miami (U. of Tenn., 1941)
Hudson, Otho C., Miami (U. of Louisville, 1926)
Jorgenson, Harvey L., Marinette, Wis. (Minn., 1930)
Karaphillis, John T., Tarpon Springs (Tulane, 1942)
Keller, Theodore C., Jacksonville (Tulane, 1942)
Kenney, William E., Brighton, Mass. (Yale, 1941)
Kerr, George R., Orlando (U. of W. Ont., 1936)
Kiesewetter, W. B., Chalfont, Pa. (U. of Pa., 1942)
Kleinman, Bernard S., Chicago (U. of Ill., 1926)
Knight, Lanar L., Gainesville (Temple, 1941)
Lanier, James C., Jacksonville (Vanderbilt, 1942)
Lawwill, Stewart, Chattanooga (Vanderbilt, 1915)
Leitner, Elmer E., Jacksonville (Med. Evang., 1942)
Long, Martin H., Jr., Jacksonville (U. of Pa., 1942)
Loud, Norman W., Bangor, Me. (Harvard, 1919)
McBrayer, William T., Atlanta (Emory, 1942)
McCarthy, Eugene G., Mayport (L. I. Coll., 1933)
McMillan, Eugene C., Jr., Macon, Ga. (Emory, 1942)
Mason, William G., Tampa (Tulane, 1941)
Mills, Clarence W., Jr., Atlanta (Emory, 1942)
Mims, Leon H., Jr., Miami (Duke, 1941)
Moore, Herman K., Macon, Ga. (U. of Ga., 1941)
Morse, Cornelia D., Auburn, N. Y. (Cornell, 1938)
Nadeau, Natalie A., Chicago (Loyola, 1929)
Newitt, Arthur W., Jacksonville (Detroit Med., 1917)
Nichols, William G., Orlando (Tulane, 1942)
Nickau, Robert H., Jacksonville (Duke, 1939)
Nixon, Waldense, Orlando (Meharry, 1942)
Owens, Paul L., Orlando (Northwestern, 1925)
Page, William G., West Palm Beach (Jefferson, 1939)

Pendley, Walter O., Rome, Ga. (Emory, 1942)
Pettit, Paul H., Miami (Jefferson, 1941)
Pilkington, Joseph W., St. Petersburg (Emory, 1942)
Pyle, Frank J., Orlando (U. of Pittsburgh, 1931)
Robertson, J. G., Atlanta, Ga. (Emory, 1942)
Roush, F. W., Jr., St. Petersburg (Cincin. U., 1941)
Runk, Charles S., Somerset, O. (Eclectic Med., 1919)
Schell, Warren W., Jr., Jacksonville (Meharry, 1941)
Schlesinger, Jacob, Hammond, Ind. (Chicago, 1914)
Schwalb, Otto W., Ft. Lauderdale (U. of Ga., 1928)
Scott, Joseph W., Live Oak (U. of Md., 1942)
Shelley, Joseph A., Palatka (Temple, 1942)
Smith, Lynwood B., Tampa (Johns Hopkins, 1942)
Smith, Sidney, Orlando (Rush, 1941)
Stephens, John A., Atlanta (Geo. Wash. U., 1942)
Thompson, J. Q. U., Jacksonville (Harvard, 1942)
Truebger, Harold M., Ft. Myers (Vanderbilt, 1942)
Vinson, Clifford E., Miami (Coll. Med. Evang., 1941)
Wall, Walton B., Jr., Jacksonville (Wash. U., 1940)
Weary, Willard B., Flushing, N. Y. (Chicago U., 1938)
Williams, George, Jr., Miami (Harvard, 1941)
Wisdom, David, Chipley, Ga. (Emory, 1942)
Wood, Jonathan H., Jacksonville (Emory, 1942)
Wood, Rowland E., St. Petersburg (Jefferson, 1940)
Zellner, Robert E., Orlando (Rush, 1940)
Zilinski, Stella B., Tampa (Womans Med., 1936)

BIRTHS AND DEATHS

BIRTHS

Dr. and Mrs. John P. Turk, Jr., of Miami, announce the birth of a son, John P. III, on June 27.

DEATHS

Dr. Robert L. Cline of Lakeland died on July 7, 1942.

STATE NEWS ITEMS

Dr. M. A. Collier of Wauchula is taking special work in gynecology at the Mayo Clinic in Rochester, Minn.

Dr. W. T. Simpson of Winter Haven visited a number of clinics in New York City during the month of July.

Members of the Florida Medical Association who attended the meeting of the Association for the Study of Internal Secretions, held in Atlantic City, June 8 and 9, were: Dr. Carlos P. Lamar, Miami, and Dr. James R. Cogan, Miami Beach.

Dr. S. G. Hollingsworth of Bradenton was guest speaker at the Bradenton Optimist Club on July 1.

Dr. C. H. Wilson of Bartow took a short post-graduate course in general practice at Johns Hopkins Hospital in Baltimore during the month of August.

Dr. Amelia B. Sheftall announces the removal of her offices from Gainesville to 1818 Hendricks Avenue, Jacksonville. She will limit her practice to pediatrics.

The Florida doctors who attended the post-graduate clinic at Emory University, Atlanta, in June were: R. L. Hughes, Bartow; L. L. Whiddon, Ft. Pierce; R. L. Miller, Graceville; R. L. Cline, G. C. Overstreet, W. L. Tillis, Lakeland; A. L. Rowe, Lake Worth; M. B. O'Kelley, Leesburg; Walter C. Jones, Miami; E. V. Anderson, A. R. Haisfield, H. B. Haisfield, Pensacola; J. E. Harris, A. L. Matthews, A. O. Morton, Sarasota; Edgar W. Stephens, West Palm Beach, and B. J. Bond, Winter Haven.

ROBERT LAURINE CLINE

Dr. Robert L. Cline, prominent Lakeland physician and civic worker, died on July 7, at the age of 70.

A native of Harris County, Georgia, Dr. Cline spent his boyhood there and later attended Emory University, then Oxford, and the University of Georgia Medical School. He did graduate work at Tulane University, New Orleans, and at Bellevue Hospital, New York City, and also attended the Eye, Ear, Nose and Throat Hospital in New Orleans.

He began the practice of his profession in north Florida, and after one year, moved to Arcadia, where he remained until he came to Lakeland in 1921.

Widely known throughout Florida, not only because of his professional skill but also because of his friendly disposition, Dr. Cline had a large practice as an eye, ear, nose and throat specialist, but he managed to find time for numerous civic enterprises.

He was an ardent lover of nature and had spent considerable time during the past year urging Lakelanders to set out oak trees in order to help beautify the city. As a result, hundreds of oaks were planted.

Dr. Cline was a life member of the Florida Medical Association and a Fellow of the American Medical Association. He was a charter member and a past president of the Lakeland Kiwanis Club, a member of the Florida Southern College board of trustees and the College Heights Methodist Church board of stewards. He was also a

member of the original building committee of College Heights.

Dr. and Mrs. Cline, who was Miss Nilwon Nowlin of Martin, Tenn., were married on Oct. 5, 1910.

Besides the widow, he is survived by three sons, Robert Nowlin Cline and Thomas Cline, Lakeland, and Lieut. Wade Cline, St. Petersburg; two sisters, Mrs. A. C. Hobbs and Mrs. Ross Blanton, Columbus, Ga.; and three brothers, Dr. H. E. Cline, Haines City; C. R. Cline, Bradenton, and W. E. Cline, Hamilton, Ga.

Dr. Cline will be missed at future meetings of the Florida Medical Association. For many years past he served as delegate from the Polk County Medical Society, and took a keen interest in the affairs of the Association.

STATE OF FLORIDA
MILITARY DEPARTMENT
OFFICE OF THE ADJUTANT GENERAL
STATE ARSENAL, ST. AUGUSTINE

February 10, 1942.

GENERAL ORDERS,
NO. 2

1. Announcement is made with profound regret of the death of Brigadier General Henry Bacon, Florida National Guard Retired, which occurred at Jacksonville, Florida, February 8, 1942.

2. Brigadier General Bacon was born at St. Marys, Georgia, March 27, 1858. He entered the military service of the State April 5, 1889, when he was appointed Colonel and Surgeon General of the Florida State Troops, in which position he was reappointed and continued in service until the re-organization of the organized militia of the State as a National Guard of Florida, when he was appointed Colonel in the Medical Corps, since which time he has served continuously as the Senior Officer of the Medical Department and as acting Surgeon General. Appointed Brigadier General on the retired list January 27, 1915, in consideration of his having served nearly twenty-five years in the grade of Colonel.

3. Funeral services were held at Jacksonville, Florida, at 2:00 o'clock P. M., February 9, 1942. Interment was in St. Marys Cemetery at St. Marys, Georgia.

4. In the death of Brigadier General Bacon the National Guard of the State of Florida has lost a friend and staunch supporter, and the State of Florida a distinguished citizen and able soldier.

5. As a mark of respect the flag at the State Arsenal and all armories throughout the State was displayed at half staff on the day of the funeral.

BY COMMAND OF THE GOVERNOR:

VIVIAN COLLINS,
The Adjutant General.

OFFICIAL:

J. B. ROUSSEAU,
Major, Retired,
Assistant.

COMPONENT COUNTY SOCIETIES

ESCAMBIA

Major Walter E. Murphree and Major Joseph I. Laird, members of the medical recruiting board, Camp Blanding, were featured speakers at a special meeting of the Escambia County Medical Society held on July 1. They discussed the regulations for classifying members of the medical profession for possible service in the armed forces.

LEE

The Lee County Medical Society stands 100 per cent paid for 1942. This society is headed by Dr. Harvie J. Stipe of Ft. Myers, president; Dr. H. Quillian Jones, Ft. Myers, vice president; and Dr. A. Louis Girardin, Ft. Myers, secretary-treasurer.

LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON

The quarterly meeting of this society was held Thursday, July 16, at Wakulla Springs Lodge. The meeting was of unusual interest and well attended. On the scientific program guest speakers appeared from Thomasville, Ga., and Jacksonville. The program was as follows:

"Influenzal Meningitis, a Recovery, with a Review of Some of the Literature," Helen Bellhouse, M. D., Thomasville, Ga.

"Some General Remarks About Ear Infections," George W. Brown, Jr., M. D., Tallahassee.

"Reactions to Sulfathiazole with Case Reports," L. L. Dozier, M. D., Tallahassee.

"Hypertension," Webster Merritt, M. D., Jacksonville.

Discussion opened by B. A. Wilkinson, M. D., Tallahassee.

PINELLAS

The Pinellas County Medical Society held a dinner meeting at Clearwater Beach on July 3. Drs. P. H. Guinand and H. E. Winchester presented a paper on "Enterolithiasis; Case Report."

The Society's second meeting, scheduled for July 15, at the beach home of Dr. L. M. Gable, was cancelled inasmuch as Dr. Gable had gone into service. There will be no meeting of the Society in August.

BUREAU OF PROFESSIONAL RELATIONS

University of Florida—School of Pharmacy

GASTRIC ANTACIDS

MAGNESIUM TRISILICATE

Antacids are employed primarily to reduce or neutralize the acidity of the gastric secretion, preferably by local action rather than through systemic alkalinizing effects. It is known that gastric acidity is largely caused by an excess of free hydrochloric acid, although other fermentative acids may contribute to its production.

Available to the physician is a group of accepted drugs and chemicals, those gastric antacids in common use being the basic phosphates, bismuth compounds, aluminum compounds, the bicarbonates, magnesium or calcium salts. The physician, in designing an antacid prescription, can proportion such ingredients to suit the specific and individual needs of the patient.

Magnesium trisilicate is not actually a gastric antacid, but instead is classed as an adsorbent. In the presence of acid, magnesium trisilicate acquires a gelatinous consistency, probably the formation of silicious acid which is a neutral colloidal gel. If any of the gelatinous mass lodges in the crater of an ulcer it will progressively neutralize the acid which diffuses through it. Trisilicate arrested in a crater should establish a local pepsin-free zone since its adsorptive power is sustained. In the opinion of Mutch,[1, 2] magnesium trisilicate has adsorptive power superior to any other medicaments in common use as adsorbents. His reports indicate that the immediate adsorptive action is great, and that this activity continues through the gastrointestinal tract. Trisilicate exhibits an antacid power which is sustained even in the presence of excess acid, thus facilitating a continuous control of hyperchlorhydria in the gastric contents as a whole. Neither constipation nor diarrhea has been reported as a result of the use of magnesium trisilicate. According to Mutch, alkalosis, pyloric obstruction, interference with digestion or secondary rises in acid secretion followed by gastritis are rarely observed.

Other adsorbents commonly employed include kaolin and colloidal aluminum hydroxide. Goldstein[3] reported satisfactory results with a combination of magnesium trisilicate, aluminum hydroxide and kaolin.

REFERENCES

1. Mutch, N.: Synthetic Magnesium Trisilicate; Its Action in Alimentary Tract, Brit. M. J. 1: 205-208 (Feb. 1) 1936.
2. Mutch, N.: Silicates of Magnesium, Brit M. J. 1: 143-148 (Jan. 25) 1936.
3. Goldstein, H. L.: Med. Rec. 148: 417, 1938.

ABSTRACT DEPARTMENT

Members of the Florida Medical Association who have had articles published in out-of-state medical journals are requested to forward such journals or reprints to Box 1018, Jacksonville, for abstracting in this department.

PNEUMOPERITONEUM IN THE TREATMENT OF PULMONARY TUBERCULOSIS, FOWLER, W. O., ORLANDO, AM. REV. TUBERC. **44**: 474-478 (OCT.) 1941.

In the opinion of the author, therapeutic pneumoperitoneum in the treatment of tuberculosis is indicated in:

1. Far advanced cases when no other procedure is applicable.
2. Bilateral tuberculosis with adhesive pleuritis which prevent use of pneumothorax.
3. Unilateral tuberculosis with adhesive pleuritis, too acute for thoracoplasty.
4. Predominantly basal lesions. Here pneumothorax is still the method of choice but the author feels that pneumoperitoneum affords a direct means of attack with low incidence of complications.
5. Selected cases to enhance the effect of phrenic nerve block.
6. Uncontrollable hemorrhage, especially when pleural adhesions are present.

Fifty-six patients out of 1,200 admissions to the State Tuberculosis Sanatorium were given pneumoperitoneum. Of these, 25 per cent later died, 19 per cent are unimproved, and in 54 per cent the condition is arrested or improved.

THE SIGNIFICANCE OF TARGET CELLS IN ANEMIA, BOHROD, MILTON G., MIAMI BEACH, AM. J. M. SC. **202**:869-874 (DEC.) 1941.

The author reviews the literature and directs attention to the fact that the appearance of target cells in anemia, rather than being unusual, is very common. He states that "rarely are they present for as much as a week, while in the majority of cases they are seen for four or five days. They usually first appear on the third or fourth day following a hemorrhage." He points to the coincidence of a transitory decreased fra-

gility of the erythrocytes with the appearance of target cells, and cites a case in point.

Based on one assumption, namely that the cell does not change its shape in vivo, the author offers a convincing explanation of the appearance of target cells in anemia. He states that "this assumption is not as startling as may at first sight appear." He reaches the following conclusions:

1. Target cells are commonly seen in the regeneration of blood, regardless of the cause of the blood loss.
2. In acute anemias they are present for only a short time early in the regenerative phase, and they have disappeared by the time a significant rise of erythrocyte count is evident. In chronic anemias they may be present over long periods of time.
3. The question of normal shape of the circulating erythrocyte should be re-examined. It is possible, but not yet proven, that the target cell preserves the bowl shape of the intravascular cell in modified form and resists deforming influences which are responsible for producing the biconcave disc seen in blood outside the body.
4. The target cell is a hyperresistant cell produced by the bone marrow in response to the blood loss. Increased resistance to the hemolytic action of hypotonic saline and to acetic acid has been demonstrated.
5. The contention that the target cell represents the fundamental defect in Cooley's anemia seems to be unjustified. It is simpler, in the light of available evidence, to regard the target cell in this disease, as in sickle-cell anemia and many other anemias, as a response to the blood destruction rather than the cause of it.

An excellent bas-relief photomicrograph showing target cells accompanies the article.

BOOKS RECEIVED

Acknowledgment of books received will be made in this column and this will be deemed by us a full compensation to those sending them. A selection will be made for review as expedient.

The Doctor and the Difficult Child. By William Moodie, M. D., F. R. C. P., D. P. M., Medical Director, London Child Guidance Clinic and Training Center, London. Cloth. Price, $1.50. Pp. 214. New York: The Commonwealth Fund; London: Oxford University Press, 1940.

It is Your Life. Keep Healthy; Stay Young; Live Long. By Max M. Rosenberg, M. D. Cloth. Price, $2.50. Pp. 450, with 14 illustrations. New York: The Scholastic Book Press, 1940.

Medical Nursing. By Edgar Hull, M. D., F. A. C. P., Clinical Professor of Medicine, Louisiana State University School of Medicine, New Orleans; Christine Wright, R. N., B. S., Instructor of Nursing Arts, Charity Hospital School of Nursing, New Orleans, 1928-1939, and Ann B. Eyl, B. S., Assistant Dietitian, Cook County School of Nursing, Chicago. Fabrikoid. Price, $3.50. Pp. 588, with 168 illustrations. Philadelphia: F. A. Davis Company, 1940.

A Primer on the Prevention of Deformity in Childhood. By R. Beverly Raney, B. A., M. D., Associate in Orthopaedic Surgery, Duke University School of Medicine, Durham, N. C., in collaboration with Alfred Rives Shands, Jr., B. A., M. D., Medical Director, Alfred I. duPont Institute of the Nemours Foundation, Wilmington, Del. Cloth. Price, $1. Pp. 188, with 88 illustrations. Elyria, Ohio: National Society for Crippled Children, Inc., 1941.

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MEDICINE—Two Weeks Intensive Course will be offered starting October 5th. Two Weeks Course in Gastro-Enterology will be offered starting October 19th. One Month Course in Electrocardiography and Heart Disease every month, except August and December.

FRACTURES & TRAUMATIC SURGERY—Two Weeks Intensive Course will be offered starting September 21st. Informal Course available every week.

GYNECOLOGY—Two Weeks Intensive Course will be offered starting October 5th. Clinical and Diagnostic Courses every week.

OBSTETRICS—Two Weeks Intensive Course will be offered starting September 21st. Informal Course every week.

OTOLARYNGOLOGY—Two Weeks Intensive Course will be offered starting September 14th. Clinical and Special Courses every week.

OPHTHALMOLOGY—Two Weeks Intensive Course will be offered starting September 28th. Five Weeks Course in Refraction Methods starting October 19th. Informal Course every week.

ROENTGENOLOGY—Courses in X-Ray Interpretation, Fluoroscopy, Deep X-Ray Therapy every week.

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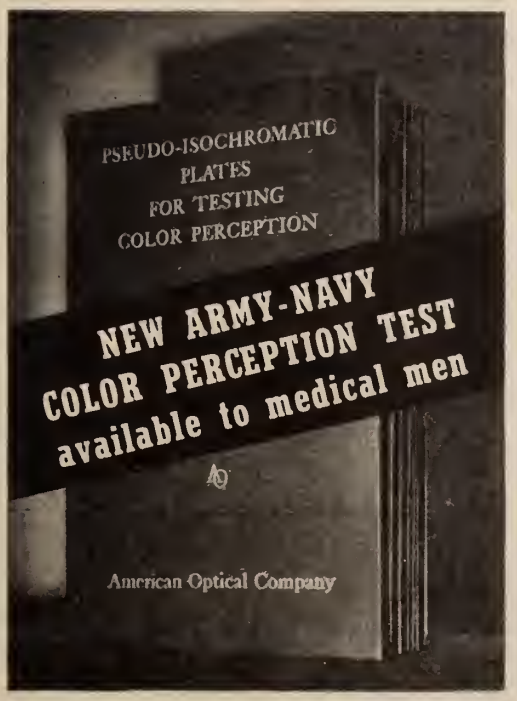
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OFFICE ENDOCRINOLOGY. By Robert B. Greenblatt, B. A., M. D., C. M., Professor of Experimental Medicine, University of Georgia School of Medicine, Augusta. This booklet is in answer to the suggestion of postgraduate class students. Paper. Pp. 106, with 8 illustrations. Augusta, Ga.: Walton Printing Company, 1941.

NEPHRITIS. By Leopold Lichtwitz, M. D., Chief of the Medical Division of Montefiore Hospital, Clinical Professor of Medicine, Columbia University, New York. Dr. Lichtwitz's treatise on nephritis is the result of a lifelong study of renal pathology at the bedside and in the laboratory. Cloth, Price, $5.50. Pp. 344, with 120 illustrations and tables. New York: Grune and Stratton, 1942.

THE MODERN ATTACK ON TUBERCULOSIS. By Henry D. Chadwick, M. D., Commissioner of Public Health of the Commonwealth of Massachusetts, 1933-1938, Medical Director of Middlesex Tuberculosis Sanatorium, 1938-1941; and Alton S. Pope, M. D., Deputy Commissioner of Public Health and Director of the Division of Tuberculosis, Commonwealth of Massachusetts, Boston. This handbook makes no pretense of adding to the sum of our knowledge of tuberculosis. The attempt has here been made to provide a concise digest of the experience of many workers and of present-day practices, in a form serviceable to the health officer and administrator. Cloth. Price, $1.00. Pp. 95. New York: The Commonwealth Fund, 1942.

ENCEPHALITIS: A CLINICAL STUDY. By Josephine B. Neal, A. B., M. D., Sc. D., F. A. C. P., Associate Director, Bureau of Laboratories, Department of Health, New York, Clinical Professor of Neurology, College of Physicians and Surgeons, Columbia University, New York. Cloth. Pp. 563, with illustrations. New York: Grune and Stratton, Inc., 1942.

ESSENTIALS OF DERMATOLOGY. By Norman Tobias, M. D., Senior Instructor in Dermatology, St. Louis University, St. Louis. Fabrikoid. Price, $4.75. Pp. 497, with illustrations. Philadelphia, London, Montreal: J. B. Lippincott Company, 1941.

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STATE AND SECTIONAL MEETINGS

SOCIETY	PRESIDENT	SECRETARY	ANNUAL MEETING
Florida Medical Association	Gilbert S. Osincup, Orlando	Shaler Richardson, Jacksonville	St. Petersburg, Apr. 12-14, 194
Florida Medical Districts:			
A—Northwest	Courtland D. Whitaker, Marianna	Stewart Thompson, Jacksonville	Tallahassee, Postponed
B—Northeast	L. Y. Dyrenforth, Jacksonville	" " "	Ocala, Postponed
C—Southwest	Edgar Watson, Lakeland	" " "	Sarasota, Postponed
D—Southeast	Lloyd J. Netto, W. Palm Beach	" " "	Miami, Postponed
Alabama Medical Association	H. B. Searcy, Tuscaloosa	D. L. Cannon, Montgomery	Birmingham, Apr. 20-22, 1943
Georgia, Medical Assn. of	James A. Redfearn, Albany	E. D. Shanks, Atlanta	Atlanta, May 11-14, 1943
Florida—			
Section, Am. College Phys.	R. H. Knowlton, St. Petersburg	Kenneth Phillips, Miami	St. Petersburg, Apr. 11-12, 194
Dental Society, State	I. W. Shields, Miami	W. P. Wood, Jr., Tampa	Tampa, Nov. 9-11, 1942
Derm. and Syph., Soc. of	Wiley M. Sams, Miami	Lauren M. Sompayrac, Jacksonville	St. Petersburg, Apr. 11-12, 1943
East Coast Medical Association	T. C. Kenaston, Cocoa	I. M. Hay, Melbourne	Melbourne, 1942
Hospital Association	Mr. Ernest G. McKay, Tampa	Mr. R. L. Martin, St. Petersburg	Tampa—Postponed
Industrial Surgeons, Assn. of	Frank D. Gray, Orlando	Richard H. Walker, Orlando	St. Petersburg, Apr. 11-12, 19
Medical Postgraduate Course	Turner Z. Cason, Jacksonville	Chairman	
Nurses Association, State	Mrs. M. Stetson, St. Petersburg	Mrs. Phyllis Leonard, St. Augustine	Orlando, November, 1942
Ophthal. & Otol., Soc. of	Shaler Richardson, Jacksonville	C. E. Dunaway, Miami	St. Petersburg, Apr. 11-12, 19
Pathological Society	L. Y. Dyrenforth, Jacksonville	Iva C. Youmans, Miami	St. Petersburg, Apr. 11-12, 19
Pediatric Society	Ludo von Meysenbug, Daytona B.	Robert Blessing, Ft. Lauderdale	St. Petersburg, Apr. 11-12, 19
Pharmaceutical Association, State	Mr. Emmett L. Brown, Palatka	Mr. R. Q. Richards, Ft. Myers	
Public Health Association	W. H. Pickett, Jacksonville	Lloyd N. Harlow, Jacksonville	Miami, Fall, 1942
Radiological Society	John N. Moore, Ocala	Walter A. Weed, Orlando	St. Petersburg, Apr. 11-12, 19
Railway Surgeons' Association	Frank D. Gray, Orlando	W. C. Page, Cocoa	St. Petersburg, Apr. 11-12, 19
Tuberculosis & Health Assn.	Mr. E. M. Newald, Orlando	Mrs. C. R. Whitaker, Eustis	
Chattahoochee Valley Med. Assn.	Herbert E. White, St. Augustine	Robert B. McIver, Jacksonville	Postponed
Gulf Coast Clinical Society	G. G. Oswalt, Mobile, Ala.	C. L. Rutherford, Mobile, Ala.	Mobile, 1942
S.E. Sec., Am. Cong. Phys. Ther.	John J. McGuire, Pensacola	Kenneth Phillips, Miami	
Southeastern Surgical Congress	Alton Ochsner, New Orleans	B. T. Beasley, Atlanta	Louisville, Mar. 8-10, 1943
Southern Medical Association	M. Pinson Neal, Columbia, Mo.	Mr. C. P. Loranz, Birmingham	Richmond, November 10-12, 19
Suwannee River Medical Society	L. J. Arnold, Jr., Lake City	T. H. Bates, Lake City	Lake City, Dec. 1942

COMPONENT SOCIETIES BY DISTRICTS

	SOCIETY	PRESIDENT	SECRETARY	MEETING DATE	MEMBERS Total	MEMBERS Paid	COUNCILOR
A	Bay	M. F. Parker, M.D. Panama City	J. O. Barfield, M.D. County Health Unit Panama City		10	9	
	Escambia *Santa Rosa	A. L. Stebbins, M.D. State Bd. of Health Pensacola	William S. Randall, M.D. 1419 E. Cervantes St. Pensacola	2nd Tuesday 8:00 P.M.	52	51	A-1-43 C. D. Whitaker, M.D. Marianna
	Franklin-Gulf	Thos. Meriwether, M.D. Wewahitchka	J. R. Norton, M.D. Port St. Joe	3rd Tuesday Odd Months	5	4	
	Jackson *Calhoun	W. R. Wandeck, M.D. Marianna	R. N. Joyner, M.D. Marianna	2nd Tuesday 7:30 P.M.	12	100%	
	Walton-Okaloosa	A. G. Williams, M.D. Lakewood	R. B. Spires, M.D. DeFuniak Springs	3rd Thursday 8:00 P.M.	6	100%	
	Washington-Holmes	N. J. Dawkins, M.D. Vernon	B. W. Dalton, M.D. Vernon		6	100%	
	Columbia *Baker, Hamilton	Harry S. Howell, M.D. Blanche Hotel Annex Lake City	Thomas H. Bates, M.D. Blanche Hotel Annex Lake City	1st Monday 7:30 P.M.	11	100%	A-2-44 William D. Rogers, M.D. Chattahoochee
	Leon-Gadsden-Liberty-Wakulla-Jefferson	G. H. Garmany, M.D. Tallahassee	B. A. Wilkinson, M.D. Telephone Bldg. Tallahassee	Quarterly 3:00 P.M.	41	37	
	Madison-Suwannee	Eustace Long, M.D. Madison	E. D. Thorpe, M.D. Madison		8	100%	
	Taylor *Dixie, Lafayette	J. C. Ellis, M.D. Perry	Chas. A. O'Quinn, M.D. Perry	Last Friday 8:00 P.M.	5	100%	
B	Alachua *Bradford, Gilchrist, Union	R. E. Summitt, M.D. 122 No. Pleasant St. Gainesville	Chester F. Ahmann, M.D. 1043 W. Masonic Gainesville	2nd Wednesday 7:30 P.M.	29	21	B-3-43 L. Y. Dyrenforth, M.D. Jacksonville
	Duval *Clay, Nassau	Ernest B. Milam, M.D. 508 Greenleaf Bldg. Jacksonville	Frank G. Slaughter, M.D. 2033 Riverside Ave. Jacksonville	1st Tuesday 8:15 P.M.	192	100%	
	Marion *Levy	B. S. Stutts, M.D. Anderson Bldg. Dunnellon	T. Hartley Davis, M.D. 202 Commercial Bank Ocala	3rd Thursday 12:30 P.M.	29	28	
	Putnam	J. Worth Brantley, M.D. Grandin	C. M. Knight, M.D. Palatka	2nd Tuesday Even Months 7:00 P.M.	10	9	
	St. Johns	W. D. Webb, M.D. 220 St. George St. St. Augustine	Charles C. Grace, M.D. East Coast Hospital St. Augustine	3rd Tuesday 8:30 P.M.	12	100%	
	Brevard	G. T. von Colditz, M.D. Route 1 Cocoa	I. K. Hicks, M.D. Melbourne	3rd Wednesday	11	10	B-4-44 Meredith Mallory, M.D. Orlando
	Lake *Sumter	Louis R. Bowen, M.D. Box 905 Eustis	R. H. Williams, M.D. State Theater Bldg. Eustis	1st Thursday 12:30 P.M.	20	16	
	Orange *Osceola	Spencer A. Folsom, M.D. 319 Exchange Bldg. Orlando	E. E. Hitchcock, M.D. 740 N. Magnolia Orlando	3rd Wednesday 8:30 P.M.	88	80	
	Seminole	C. L. Park, M.D. 515 1st Nat. Bank Bldg. Sanford	O. L. Barks, M.D. Sanford Clinic Sanford	2nd Monday 7:00 P.M.	13	100%	
	Volusia *Flagler	W. C. Pay, M.D. 221 W. Rich Ave. DeLand	R. L. Miller, M.D. 258½ S. Beach St. Daytona Beach	2nd Tuesday 7:30 P.M.	46	40	
C	Hillsborough	B. W. Lowry, M.D. 1019 Citizens Bldg. Tampa	James S. Grable, M.D. 811 Citizens Bldg. Tampa	1st Tuesday 8:00 P.M.	104	96	C-5-44 Leland F. Carlton, M.D. Tampa
	Manatee	L. W. Blake, M.D. Bradenton	M. M. Harrison, M.D. Professional Bldg. Bradenton	3rd Tuesday 7:00 P.M.	14	100%	
	Pasco-Hernando-Citrus	J. T. Bradshaw, M.D. San Antonio	G. R. Creekmore, M.D. Brooksville	2nd Thursday 7:00 P.M.	13	100%	
	Pinellas	M. A. Nickle, M.D. 503 Coachman Bldg. Clearwater	O. O. Feaster, M.D. 166 Fourth Ave. N. E. St. Petersburg	1st and 3rd Fridays 6:30 P.M.	106	100%	
	Sarasota	A. Lamar Matthews, M.D. Sarasota	Stanley T. Martin, M.D. 361 Main St. Sarasota	2nd Tuesday 8:30 P.M.	19	15	
	DeSoto-Hardee-Highlands-Charlotte-Glades	L. W. Martn, M.D. Sebring	G. H. McSwain, M.D. Arcadia	2nd Tuesday 8:00 P.M.	19	18	C-6-43 Edgar Watson, M.D. Lakeland
	Lee *Collier, Hendry	Harvie J. Stipe, M.D. 312 Pythian Bldg. Fort Myers	A. Louis Girardin, M.D. 309 Pythian Bldg. Fort Myers	3rd Tuesday 7:30 P.M.	17	100%	
	Polk	J. R. Boulware, M.D. Box 367 Lakeland	Edgar Watson, M.D. Box 1021 Lakeland	2nd Wednesday 1:00 P.M.	60	55	
D	Palm Beach	James R. Sory, M.D. 616 Harvey Bldg. W. Palm Beach	D. W. Martin, M.D. 618 Comeau Bldg. W. Palm Beach	4th Monday 8:00 P.M.	68	67	D-7-43 Lloyd J. Netto, M.D. West Palm Beach
	St. Lucie-Okeechobee-Indian River-Martin	R. C. Boothe, M.D. Box 408 Ft. Pierce	Adrian M. Sample, M.D. Box 176 Ft. Pierce	3rd Thursday 8:00 P.M.	18	100%	
	Broward	Elbert McLaury, M.D. 210 Hollywood Bk. Bldg. Hollywood	O. C. Brown, M.D. 915 Sweet Bldg. Fort Lauderdale	4th Wednesday 8:00 P.M.	41	100%	D-8-44 Elbert McLaury, M.D. Hollywood
	Dade	Thomas O. Otto, M.D. 704 Huntington Bldg. Miami	Wiley M. Sams, M.D. 305 Ingraham Bldg. Miami	1st Tuesday 8:30 P.M.	346	298	
	Monroe	Harry C. Galey, M.D. 532 Fleming St. Key West	W. R. Warren, M.D. 511 Eaton St. Key West	1st Sunday 9:00 P.M.	5	100%	

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Vol. XXIX SEPTEMBER, 1942 No. 3

THE N.Y. ACADEMY OF MEDICINE
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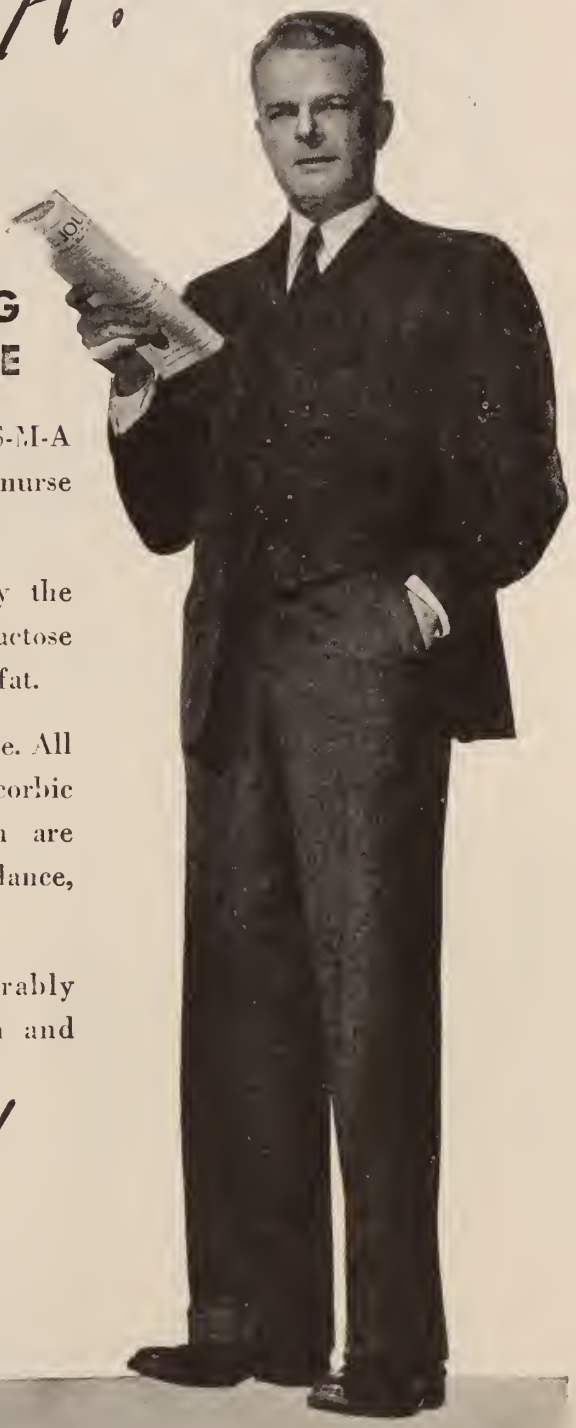
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BED REST IN CORONARY THROMBOSIS

JAMES A. BRADLEY, M. D.
ST. PETERSBURG

Prior to 1932, the subject of coronary thrombosis with infarction was to me one of only passing interest since I dealt with it entirely in my full time hospital duties in large charity hospitals where patients were seen only during the acute stages of the disease and were then sent to their homes. The subsequent course of their illness was thus not known. My interest in this disease was greatly increased, however, and its management became of the utmost importance to me when in February of that year my mother was suddenly afflicted with this cardiac condition. Here for the first time I had an opportunity to observe personally the daily symptoms and feelings of one whose active life was suddenly subjected to this type of attack. Here, also for the first time, I attempted to visualize mentally the microscopic details as well as the gross pathologic changes of the healing histologic processes with the functional capacity of the heart itself and its ability to perform its systemic duties, thus enabling the body to return to a useful human unit.

This train of thought as a natural sequence brought forth these questions: First, what are the pathologic changes, gross and microscopic, in the heart itself? Second, what is the repair process? Third, how long does it take to complete this repair process? Fourth, what tissue defects remain? Fifth, how do these defects influence the heart's continued activity and functional capacity?

PATHOLOGIC CHANGES AND REPAIR

In the specimen demonstrating the gross pathologic changes the swollen area of infarction projects above the surrounding tissue, according to MacCallum,[1] and has a pericardial surface somewhat congested and covered with a small amount of fibrous exudate. At first the myocardial surface is firm, pale clay-colored and drier than normal, with an irregular border which is at times dark red because of blood in this area. In two or three days this surface becomes yellow-brown in color with a yellow periphery and in from eight to ten days, when granulation tissue begins to form, this peripheral zone has a reddish purple appearance. Shortly after the infarction takes place, autolytic processes cause a softening, which at times causes death. In three or four weeks the center area assumes a pale red-brown color with granulation tissue surrounding small islands of necrotic tissue. Von Haam[2] described this scar formation as first pink, then white in color. Mallory, White and Salcedo-Salgar[3] stated that "as this infarct becomes older, it contracts more and more and eventually is transformed into a shrunken, firm, white, fibrous scar which appearance it has after two or three months."

Bronson[4] described the chemical changes as follows:

> In the first minute and a half after coronary ligation, there is a rapid rise in the myocardial lactic acid content which is followed by a gradual decline during the next half hour.

The histologic changes of the healing infarct, as described by MacCallum,[1] Von Haam,[2] Mallory, White and Salcedo-Salgar,[3] Levine[5] and Karsner and Dwyer,[6] consist first of the appearance in a few hours of necrotic muscle with a varying amount of hemorrhage due to distention of venules and capillaries. The amount of fat depends upon the health of the muscle prior to the infarction, the age of the infarct and the portion of the infart examined, with a less amount occurring in infarcts within healthy muscle, in older infarcts and in the central portion of the infarct. Infiltration of polymorphonuclear leukocytes begins with the necrosis of muscle fibers and increases up to the fourth day; by the fifth or sixth day many of these leukocytes become necrotic and by the fourteenth day they have almost completely disappeared. Their function is in doubt as they do not phagocytize the necrotic muscle, but it is thought they may produce an enzyme which helps the later phagocytosis of the dead muscle cells. Eosinophils are present from the fourth to the eighteenth day.

Phagocytic removal of the necrotic muscle fibers by the mononuclear histiocytes begins about the fourth day, and, according to Mallory, White and Salcedo-Salgar,[3] active phagocytosis can be demonstrated in infarcts as old as six weeks. After six weeks absorption is difficult to demonstrate, although necrotic muscle may still be present. These phagocytes retain some of the pigment of the muscle cell and remain as pigmented macrophages; they decrease as the infarct becomes older and have practically disappeared in infarcts from one to two years old.

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Lymphocytes and plasma cells, though not so numerous, appear and disappear about the same time as the pigmented macrophages.

Karsner and Dwyer[6] noted that very small areas of necrotic muscle were still present sixty-one and seventy days after infarction had been produced in experimental dogs. In commenting on this work, Mallory, White and Salcedo-Salgar[3] observed:

> It does not seem fair to state, however, that this process goes on at the same speed in man, for it is obvious that the infarcts in the animal must be smaller because of the small size of the heart itself and also that the remaining collateral circulation in the animal heart is relatively more adequate because no marked degree of arteriosclerotic change is present.

Infiltration of blood vessels and fibroblasts begins about the fourth day and continues until the scar formation is completed. Levine[5] stated that "connective tissue begins in one week but is not pronounced until three weeks have elapsed, and is not sufficient to prevent rupture until five weeks while firm vascularized scar healing may be found eight weeks after onset." Collagen appears as fine fibers about the twelfth day, becomes prominent at three weeks and reaches a maximum in two or three months. MacCallum[1] wrote:

> Whether the conversion of a part of the heart muscle into scar tissue is followed by hypertrophy of the rest of the muscle so as to enlarge the whole heart is a question difficult to answer but naturally although the scars probably occupy less space than the muscle, in its attempt to carry on the work the heart might more than compensate for this and result in an enlargement of the whole heart.

Mallory, White and Salcedo-Salgar[3] in discussing the weight of the heart noted that "four hearts with infarcts one to two months old averaged 450 grams in weight, five hearts in which the infarct was two to six months old averaged 500 grams, and eighteen hearts in which the infarct was more than six months old averaged 570 grams." They added that "these data suggest that an infarct per se, may lead to cardiac hypertrophy." This observation would seem to indicate that cardiac readjustment was progressing over a period of six months and suggests that care should be exercised in rushing patients with this disease into their usual activity for fear that this activity may put a strain on the heart producing a state of relative anemia or ischemia. MacCallum[1] declared that "slighter grades of anemia may become evident in their effect only when great effort is demanded of the organ involved, as for example in intermittent claudication." Could one not then consider anemia as a factor in the causation of anginal pains or vice sensations that occur following coronary infarction and allow more time for the development of a cardiac reserve which would better stand stress without producing a relative anemia? Also is additional damage imposed upon the healing process by these attacks of ischemia? MacCallum[1] in referring to repair observed:

> Awkward scars or an altogether excessive mass of fibrous tissue may be produced which may even interfere seriously with the function of the organ and be entirely out of proportion with what would seem necessary for the repair of the actual gap first produced by the injury. Usually this is because the injurious agent persists and repeatedly frustrates healing by injuring the repairing tissue itself so that layer after layer of this new tissue is laid down and consolidated into a firm scar.
>
> If the person survives there is set at work a remodeling process through which in time much is done toward restoring the tissues to the normal standard.

When a person's future and happiness are involved, is it not wise to allow sufficient time for the building up of a cardiac reserve before allowing additional injury through activity?

DISCUSSION

The term bed rest throughout this paper is used to mean complete rest in bed without bath room privileges, and with the top half of the mattress elevated to an angle of from 30 to 40 degrees twenty-four hours each day. It has been my experience that the patient who is allowed bath room privileges frequently cannot understand why, if he is allowed to walk to the bath room, he cannot also be allowed to sit in a chair and rest awhile out of bed at that time; or at some time early in the course of his illness he becomes restless and wishes to get out of bed more often and for longer periods of time. Doing so of course endangers his life. It has also been my observation that patients who are allowed bath room privileges suffer more with cardiac or referred pain.

I have noted that patients accept the verdict of three months in bed just as easily as they accept the verdict of six weeks in bed, provided it is explained to them how necessary it is to give nature sufficient time to complete the scar formation in the heart. They also accept the advice that a gradual return to activity after this period of bed rest is important in order to allow the heart to adapt itself slowly to the scar that will remain. In regard to the maintenance of a back rest as against having the patient lying flat in bed, physicians have all seen patients who, having lost their vascular tone because of a prolonged supine posture, have it restored through the use

of a back rest, and as prolonged bed rest is necessary, I believe it important that the vascular tone be maintained through this correct posture in bed. In addition, one is confronted with the well known fact that physiologically the heart functions with greater ease if the patient is in a semielevated position. MacLean and Allen[7] concluded that this position is beneficial in certain types of hypotension.

In the preparation of this paper I was stimulated by knowledge of cases similar to the following which I might recount as evidence of the danger involved, or the grave chances taken in allowing patients with coronary thrombosis out of bed after six or eight weeks, a period of bed rest I have come to regard as of insufficient length:

The first case in this group was mentioned by the lecturer of a postgraduate course in cardiac disease in New York several years ago. He showed the class an electrocardiogram made early in the course of the coronary infarction and then showed another electrocardiogram taken after the patient had been in bed in the hospital for six weeks. He commented on the great improvement shown in the second tracing and stated that after the second tracing was obtained, the patient was allowed to go home, where he died a few days later. Would he have died had he had a few weeks more of bed rest?

In the second case of this group the patient was a lawyer, who had meant much to me in my earlier life. Three weeks after he had had an attack of coronary thrombosis, I visited him socially to find him appearing better than he had been for some time. He was sitting up in bed with a large ledger in front of him, smiling cheerfully and feeling fine, with no complaints. Three weeks later, or six weeks after the attack, his physician on Friday allowed him to go to the table to dinner; the next day, Saturday, he allowed him to take a short automobile ride. The following day, Sunday, he had another severe attack and died within an hour. Are we justified in taking a chance with life, no matter how well a patient appears?

The third case in this group was that of an elderly physician of my acquaintance, who for several years had been in and out of bed with repeated, although mild, attacks of pain in the region of the heart, which was transmitted to the left arm. He had at no time remained in bed more than a month or six weeks. I had known him to be greatly improved and free of attacks of pain after staying in bed for one month following the onset of one of these attacks. At the end of the month he felt so good that he returned to his office, only to have a recurrence of his anginal symptoms. Shortly thereafter he sold his practice and is now retired. He is considered by some of his colleagues to be suffering from a pronounced cardiac neurosis. Is it because in the beginning and since he has not allowed the damage to his heart to be completely repaired before submitting it to strain sufficient to produce additional damage or symptoms?

The fourth case suggesting the inadequacy of the time spent in bed is one in which the patient is now in the sixth week of bed rest. The widespread coarse basal rales, which McQuiston[8] stated are common in coronary thrombosis, here indicate that the heart has not regained sufficient strength to maintain a satisfactory circulation. Should this patient be allowed up after one or two weeks more in bed?

In contradistinction to these cases of coronary thrombosis in which the patient has had insufficient bed rest, it is well to glance at a few in which the advocated three months minimum period of bed rest was required.

In the case referred to early in this paper the patient had the attack in 1932, and since that time she has had prolonged periods of practically normal activity, which in her case means great activity. The only residual symptoms are fatigue with cervical aching pain on the left side, which is relieved by a few hours of bed rest. She is in good cardiac health at the present time.

The second case was that of E. V. T., who had a severe attack of coronary thrombosis in May 1935. After three months in bed she was in the process of gradually returning to a normal level of activity when, following her husband's sudden death, she had a second attack of equal severity on Aug. 8, 1935. A four months' period of bed rest was required following this attack. Two years later, in August 1937, she was seen in an unconscious state suffering from malaria. During the convalescence from this illness she contracted bronchopneumonia. When last heard from in 1939, she was in charge of a son's household.

In the third case Mrs. F. was first seen in 1939 about two weeks after she had experienced an attack of coronary thrombosis. Bath room privileges, granted from the onset by her vaca-

tioning physician whom I was relieving, were not denied. Pains in the left arm were her only complaint during the first eight or ten weeks she spent in bed. I cannot but believe these would not have been so evident had she been denied bath room privileges. This patient has not been seen since her discharge in 1939, though recently her son requested that I stop at her home and reprimand her for working too much in her garden and large house.

The fourth case was that of a grocer aged 45, who in 1940 had an attack of coronary thrombosis. It was evidently of a mild type in view of the relatively slight changes demonstrated by the electrocardiograph, although clinically the symptoms of the attack were rather severe. After a three months' period of bed rest and several additional months of gradually increasing activity, he returned to his large store where he continues to the present in a normally active capacity.

These 8 cases are mentioned for illustrative purposes only and are not intended as scientific presentations.

In the section of their article pertaining to clinical applications Mallory, White and Salcedo-Salgar[3] concluded:

> Thus, our findings support the more or less empirical custom of those who advise for patients with small to moderate-sized myocardial infarcts, without complications, one month of rest in bed (the first two weeks absolutely complete), and one month of very carefully graded convalescence, with a third month to consolidate recovery and to re-establish good health both of body and mind. To advise less than three weeks in bed is unwise, even for patients with the smallest myocardial infarcts, provided we are sure of the diagnosis; and it is almost equally unwise to advise prolonged bed rest in the absence of complications or when the infarct is not very large, because of the needlessness of so doing and the harm to the patient's health in general and to the morale and happiness of himself and of his family.

In view of this statement by these illustrious authors after such a painstaking study as they have reported, and especially since these conclusions are universally similar to the recommendation concerning bed rest in articles and textbooks by authors too numerous to enumerate, I cannot but feel that in recommending a minimum of three months in bed in all cases of coronary infarction, I place myself in a position comparable to that of the rookie soldier who, on looking around, complained that everybody was out of step but him. Nevertheless, I cannot get away from the gross pathologic changes, microscopic changes and clinical facts herein recounted, on which I base my conclusions. Even the apparently minor attacks may be serious, and possibly a failure to appreciate their seriousness may be the reason for many deaths which three months in bed would avoid.

Levine and Rosenbaum[7] concluded that "the severity of the acute attack bears no significant relation to the degree of subsequent angina or the duration of survival." In regard to pain these authors reported:

> There was no constant relation between the intensity of the pain and the prognosis as was demonstrated by the fact that of 46 patients with pain of mild degree 39 per cent died; of 110 patients with moderately severe pain 24 per cent died, and of 47 with severe pain, 43 per cent died, and this conclusion is further borne out by the evidence that of 6 patients with no pain at all, 5 died.

Did the patients without pain die because their cases were considered mild and they were allowed out of bed too soon? These authors also added that "the immediate outlook in a case of acute coronary thrombosis is extremely difficult to predict."

While I have mentioned only a few cases in which death ensued, possibly as a result of the patient being allowed out of bed before nature had had time to complete the healing or repair process, every physician here could add to this list. Why then does one risk the life of the patient by allowing him up in from six to eight weeks? Is it that those who have seen the beneficial effect of from six to eight weeks of bed rest on patients with acute rheumatic cardiac disease have been so impressed with these benefits in this type of cardiac condition that they have applied this time limit to coronary thrombosis with infarction without adequate thought as to the great difference in the pathologic changes involved in these two conditions? I believe that physicians who are caring for so many elderly and retired persons in this section of the country should give much thought to this question.

Most patients confronted with this condition are depressed by the thought that they have reached the end of all of life's activities; so happy are they who at the proper moment are impressed with the thought that if they remain in bed for three months, with a slow gradual return to activity thereafter, they can plan on a continued active life. They look forward to a return to work or play instead of a neurotic life in constant dread of continued cardiac pains or subsequent attacks of cardiac disease. This first attitude is possibly well exemplified by the case of the physician who retired and lives a life of

fear, possibly because he has not submitted to sufficient bed rest to allow nature to complete its repair process. It is, therefore, my opinion that a minimum of three months' bed rest in all cases of coronary thrombosis should be established for there is no adequate way at present of determining that even the apparently minor cases of coronary thrombosis are not potentially deadly if the patient is allowed early freedom from bed rest.

Bean[10] in his rather exhaustive study of infarction of the heart observed that "no specific prognostic gauge was found to be valid in an individual case." Is it not a fact that insufficient bed rest is far more dangerous in this type of case than in cases of tuberculosis in which one does not hesitate to advise not three months, but a year or more of rest in bed? Would a physician advise a tuberculous patient who had every chance of being cured though bed rest to get out of bed in the early stages of his illness and thus endanger his chance of complete recovery? Why then is this advice given in cases of coronary thrombosis with infarction?

SUMMARY

Data have been presented to show that the healing process of coronary infarction is not complete in one or two months, the usual period of bed rest advised.

In view of this conclusion and in the absence of infallibility in determining the severity of the infarction a minimum of three months' bed rest is recommended for the patient in all cases of coronary thrombosis.

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332 Fourth St. N.

DISCUSSION

Dr. T. Z. Cason, Jacksonville: This paper is thought-provoking, but I cannot subscribe to Dr. Bradley's premises nor his conclusion. I do not agree that he has presented sufficient data upon which to base his conclusion. Either his patients must have a great deal more money or a great deal more patience than mine to stay in bed for three months. What I wish to emphasize is that the thesis is bed rest for three months. One would have to take time to discuss thoroughly the causes of coronary thrombosis, which of course he could not do in his paper, in order to arrive, as I see it, conclusively at the deductions which he has drawn. Certainly each case must be considered on its own merits, and no definite rule of three months for all cases can be established as a minimum. In the first place, the time is secondary to the condition of the blood vessels. What is the age of the patient? What has been the condition of the patient prior to the coronary occlusion? All of these factors have to be taken into consideration in judging how long he should stay in bed. I grant you that some patients would require bed rest for three months, and those with a greater degree of heart block may require it for a longer time. But it seems to me that a much better scheme would be to establish a minimum period of six weeks or one month, and then decide each case on its own merits. By all means, as I see it, do not keep many patients in bed for three full months.

Dr. W. C. Blake, Tampa: From my experience, observation and information it seems that no arbitrary period of bed rest can be established in cases of coronary thrombosis. Such an approach appears to be both unscientific and manifestly unfair to the majority of the patients with this disease. This vitally important phase of the treatment is best determined on an individual basis.

The duration of the period of bed rest should depend on certain observations in the given case. At the outset it should be borne in mind that the severity of the pain has little or nothing to do with the size of the area of infarction or the seriousness of the disease. Reliable guideposts are (1) the age and general physical status of the patient, (2) the presence of congestive failure and (3) the presence of conduction defects, or extensive pericarditis. When any of these complications is present, the period of rest in bed should certainly be longer than when they do not exist. It may be necessary to keep some patients in bed for as long as three months or even longer if certain complications supervene, but there is no reason to fix an arbitrary period of three months for all patients. Naturally, too, the comparatively young person with relatively mild uncomplicated coronary disease should not be required to remain in bed as long as the elderly person with a like condition; nor is it wise to keep the elderly person quiescent longer than is absolutely necessary. The usual period in uncomplicated cases probably varies from four to eight weeks, and generally speaking, the average of six weeks in these cases has been shown to be adequate.

In their valuable histologic study, reported in an article entitled *The Speed of Healing of Myocardial Infarction*, Mallory, White and Salcedo-Salgar found that repair by connective tissue is demonstrable as early as the sixth day and becomes striking during the third week, that cicatrization develops sufficiently in five weeks to prevent rupture and that firm healing by vascularized scar tissue may be observed eight weeks after onset. They noted that the collagen becomes more and more dense from the sixth week to the second month, the process having about reached its maximum at the end of two months. Histologically, much of the necrotic tissue has been replaced by connective tissue within two weeks, they observed, and their conclusion was that small infarcts are almost completely healed after five weeks and that large infarcts are completely healed, or undergo no further discernible change, after two months. Obviously

then, there is no necessity for a three months' period of bed rest except in the very exceptional case.

Closely related to and of equal importance with the duration of the period of rest in bed is the slowness and care with which the patient is allowed to resume activity. Perhaps in uncomplicated cases he should not as a rule be permitted to resume his former occupation even though sedentary in nature, in less than three months. Certainly the period of convalescence should be six or eight weeks or longer, depending on the type of work or activity to which he desires to return.

Nor should the psychic factor be overlooked in relation to the periods of bed rest, convalescence and readjustment. Invalidism has too long been emphasized in cardiac disease. It is a far cry from the individual case reports of recovery from coronary occlusion appearing in the literature of a decade ago to the hopeful prognosis for the majority of patients as revealed in the statistical studies of today. The relatively optimistic view toward coronary occlusion now prevailing among cardiologists is not widely enough reflected, for an unwarranted dread of this disease continues to persist.

A hopeful outlook on the part of physicians may prove an invaluable asset to the patient, leading him to a useful and enjoyable life. We may well lay greater emphasis on his rehabilitation. Too often we are mislead partly by our own fear, but chiefly by the patient's fear, instilled frequently by physicians who have had too little experience with the ultimate outcome in these cases. We are prone to discount the element of psychic disability, which often looms large, as in the case of the neurotic physician mentioned by Dr. Bradley. Circumstances altered from without have all too frequently demonstrated the ability of a patient to resume successfully his former occupation or to engage in employment on an economic level. We should widen our primary goal of tiding the patient through an attack by aiming at ultimate rehabilitation from the outset. Recoverability may well be the keynote.

DR. BRADLEY (concluding): I am not in any way surprised at the adverse discussion. In reply to Dr. Cason, it was not a three months' stay for each patient, but a three months' minimum period that I advocated. I agree with him thoroughly that one has to take into consideration the various factors, such as the condition of the blood vessels, the condition of the patient prior to infarction and other considerations in each individual case.

Dr. Blake also stated that he objected to establishing an arbitrary period of three months. But, I still suggest that an arbitrary period of three months as a minimum be substituted for the present established arbitrary period of from six to eight weeks.

Dr. Blake mentioned that according to Dr. Paul White of Boston no change takes place in the coronary infarct after two months. This conclusion is not borne out in the article by Drs. Mallory, White and Salcedo-Salgar,[3] in which figure 5 shows a photomicrograph medium power of a three month infarct, and in figure 6 a photomicrograph medium power of a four year infarct. Only a glance at these two illustrations is necessary to see the greater density of the fibrous tissue and the lack of blood vessels and cell nuclei demonstrated in figure 6 as compared to figure 5.

These authors concluded that the healing process in coronary infarction is similar to the healing process in other parts of the body. Dr. Mallory in the second edition of his textbook on pathology, made the same statement, that the healing process in the heart is similar to the healing process in other parts of the body. In view of this, figures 1, 2 and 3 illustrate my point that scar formation is not completed in even three months.

Figure 1 shows a picture of a depressed healed scar of twenty-five years' duration, with a white fibrotic appearance. This is a well healed scar. In figure 2 a depressed appendectomy scar of five years' duration is shown. This is another well healed scar. Figure 3 is



Fig. 1.



Fig. 2.



Fig. 3.

shown for comparison with the others. This picture was taken on April 1, 1942. The operation was performed on Dec. 25, 1941, slightly over three months before the picture was taken. One can readily see the raised reddened vascular stage of scar formation, which indicates definitely a scar in the healing stage and shows conclusively that scar formation is not complete even in three months. Since such eminent authorities have concluded that healing in the heart is similar to healing elsewhere in the body, can one not infer that, since healing shown in these figures is not completed in three months, the healing of a cardiac infarct may be even less advanced in this same interval of time? The illustrations show the scar of a simple wound healing, and practically at rest during the healing process, while the healing of a cardiac infarct is complicated by the necessity of removing dead tissue when the heart is active. These pictures might indicate that a patient should be kept in bed longer than three months.

SCIENTIFIC PROGRAM

Members of the State Association who wish to read papers at one of the scientific sessions of the annual convention to be held in 1943, are urged to file applications at once with Dr. Herbert E. White, chairman of the Committee on Scientific Work. Dr. White has announced that no general letter calling for applications will be mailed to the entire membership of the Association. All applications should be addressed to Dr. Herbert E. White, Box 1018, Jacksonville.

RELATION OF VITAMIN B COMPLEX TO HUMAN PATHOLOGY

T. M. RIVERS, M.D.

KISSIMMEE

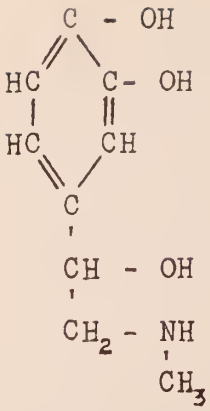
The word vitamin is derived from two words, vita and amine, the former meaning life and the latter designating a chemical compound in which ammonia is substituted for hydrogen in the molecule. From the derivation the word should mean life-amine, but this meaning could not be true except for the vitamins of the B complex, since they are the only vitamins yet worked out chemically which approach the amines in the true meaning. The name was first applied to the life-saving husk of rice polishings because of the physiologic action of these polishings in saving the life of sufferers from beriberi. Since this first application of the word it has been passed on to other supplementary food factors until it has become the common name for all of these food essentials.

CHEMISTRY

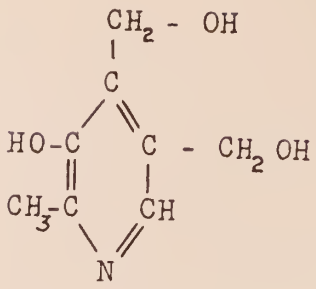
The chemistry of the vitamin B complex is peculiar in that the vitamins composing it are the only ones that have thus far been fully investigated, that contain one or more nitrogen atoms to the molecule and that for the most part are of the aromatic ring formation in structure. These characteristics indicate that their pressor action should be through the sympathetic nerves, like that of epinephrine, ephedrine and benzedrine. My observation leads me to believe that some of the constituents of the B complex have this function, but the pressor action of the B vitamins is much milder and more prolonged than that of these drugs. It is known that the action of epinephrine is rapid and powerful. The action of ephedrine and benzedrine is slower and less pronounced. The action of the amine-like molecules of the B vitamins is much milder, being of a more prolonged tonic action. Barger[1] demonstrated that the pressor action of the amines varies with the length of the side chain and the position of the hydroxyls in the molecule. A comparison of these molecules might give a hint as to the physiologic action of some of these vitamins.

The structure of the molecule of thiamin hydrochloride is a double ring, one hexagonal and one pentagonal, linked together by a hydrocarbon radical. It contains four nitrogen atoms and one sulfur atom, the latter giving it the *thi* in its

Read before the Fifth Annual Meeting of the South Central Medical District, Orlando, Nov. 1, 1941.



Epinephrine



Pyridoxine

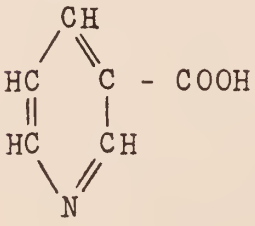
Observe the difference in the positions of the hydroxyls and in the length of the side chains. Epinephrine has powerful pressor action while pyridoxine has only tonic action.

name, making it thiamin. This vitamin seems to have little if any pressor action.

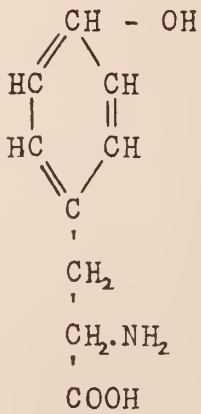
Vitamin B_2, riboflavin, is a triple hexagonal ring with moderately long side chain. It, too, may rightly be classed with the amines. Its physiologic action on the vessels of the cornea indicates a tonic pressor action. This is observed in the dilatation of the vessels of the cornea in the presence of a deficiency of this vitamin and the return to normal upon supplying the vitamin.

Vitamin B_6, pyridoxine, is a vitamin of two short side chains. It probably has some mild pressor action. It may be the inhibitory action of this vitamin which relieves certain muscular cramps.

Nicotinic acid is of the hexagonal ring formation, but it is a carboxylic acid formation similar to the amino acids. If it has any pressor action similar to that of the amines, I do not know it. Its deficiency sometimes causes diarrhea, which is relieved by replacing the amine, but it is not known whether this result is owing to a pressor action.

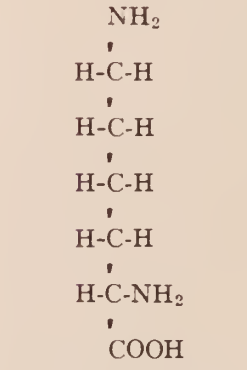


Nicotinic acid
(a carboxylic acid).

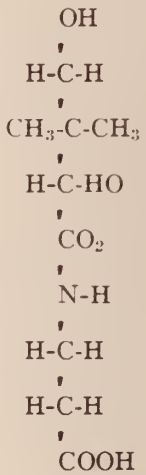


Tyrosine, an amino acid.
A carboxylic acid.
Observe the similarity
to the amino acids.

Pantothenic acid is another constituent of the B complex which partakes of the structure of the amino acids, it being a carboxylic acid in structure. It differs from the other vitamins of this complex in that it is entirely of the chain structure, having no ring upon which the chain may be attached. It seems to have a part in growth and development, not so different from the amino acid lysine, but its physiologic action is not yet fully known.



Lysine the amino acid
which maintains the growth
of the animal.



Pantothenic acid, a
carboxylic acid similar
to the amino acids.

Several other factors of the B complex have been reported, but their existence and characteristics have not yet been sufficiently proved to receive mention here.

PHYSIOLOGIC ACTION

All of the vitamins of the B complex appear to have some enzymic action, which seems to be directed more to the oxygenation of the tissues. Thiamin aids other enzymes in the assimilation of oxygen to consume the carbohydrates. For this reason its deficiency may be manifested by excess of sugar in the blood. Riboflavin aids in oxygen-hydrogen transfer and is said to combine with the phosphoric acid and a protein to aid in oxidation. Nicotinic acid is essential for concentration of the co-enzymes in metabolism. Pyridoxine acts as an enzyme for oxidation to overcome anemia. All of the B factors seem to act physiologically to produce normal balance of enzymic action in the tissues, and a deficiency of any one or more of them soon manifests itself by some morbid state. While these vitamins have definite separate action, as is manifested by their deficiency, they do seem to overlap in their phys-

iologic action. It should be ever borne in mind that it is not the vitamin but the deficiency of the vitamin which causes the symptoms of the morbid state, and that this state, if due wholly or in part to deficiency of the B vitamins, should be ameliorated by supplying the necessary vitamin in the blood. The relief should be great, if not complete, unless the deficiency has resulted in destruction of the tissue.

Deficiency of thiamin may cause beriberi with all of its symptoms, which include anorexia, multiple neuritis, peripheral neuritis, the neuritis of pregnancy, alcoholic neuritis, weak depleted muscles, and a weak cardiac muscle sometimes resulting in a dilated heart. Deficiency of riboflavin is manifested by photophobia, itching burning eyes, keratitis with or without pannus, causing blurred vision, cheilitis, worse at the corners of the mouth, rhinitis of the alae nasi and general weakness from poor cell oxygenation of the entire body. In rats this deficiency may cause cataract and in dogs it may cause ataxia. Deficiency of nicotinic acid is indicated by the symptoms of pellagra, which are stomatitis, glossitis, gastroenteritis (either simple or ulcerative), symmetric dermatitis and mental aberration. Deficiency of pyridoxine is indicated by such muscular changes as dystrophy, weakness and cramps, by paralysis agitans, by nervous diseases of the cord and by anemia due to improper cell oxidation. Deficiency of pantothenic acid is manifested by delayed growth and by overlapping symptoms of deficiency of the other B vitamins, such as cheilitis, neuritis and dermatitis.

So far as is known, all of the vitamins of the B complex are developed in the same growing plants, though they are not produced in like ratio in the various plants. While they are developed in plants, these plants may be eaten by animals, which store the vitamins in the flesh to be passed on to man in the meats, the milk and the eggs of these animals. The liver is the great storehouse of the vitamins and is far richer in them than other parts of the flesh. The lean meats, however, are usually rich in them. Ham is one of the best sources for the stored B complex. Yeast and wheat germ seem to be the best sources for the B vitamins, but they are plentiful in many plants used normally as foods. It is well to remember in making out a daily dietary to include a sufficiency of the leafy vegetables and the husks of the grains.

HUMAN REQUIREMENTS

As individuals vary in other matters of life, so they vary in their requirement of vitamins. One may require much more than another, but all require some of each of the vitamins each day. Failing to receive the vitamins, as in diseases of the alimentary tract or depleting fevers, soon results in muscular and nervous weakness. Every day each adult should receive not less than 300 units of thiamin, about twice as many of nicotinic acid and about 200 units each of riboflavin and pyridoxine. Pregnant women should receive about twice as much as the ordinary adult dose. It has been fully demonstrated that no serious harm may result from overdosage more than might result from overeating other foods. The excess may pass off by the bowels or may be eliminated by the kidneys. The only harmful result that I have observed is that these vitamins may sometimes serve as allergens. Thiamin sometimes causes severe urticaria, a condition that might result from the ingestion of any food if the subject were allergic to it.

DIAGNOSIS

When the symptoms of deficiency of this complex are well developed, presenting the typical symptoms of deficiency of any one of the members of the complex, any tyro in medicine should readily recognize the deficiency indicated; but, in the numerous cases of milder deficiency, in which the symptoms are not yet well outlined in the clinical picture, the diagnosis is difficult and confusing. The diagnosis may be based on the living habits of the patient, on the symptoms in the clinical picture, on the urinalysis and on the elimination of other possible causes of the symptoms presented. An important point in diagnosis is the tendency of deficiency of the B vitamins to be symmetric in the morbid symptoms. In pellagra this is most notable in the skin lesions. Except in cases of established diet, as observed in the dietary use of rice in the East, a symptom of one deficiency of the B complex usually indicates deficiency of the others of the complex though this may be to a less degree.

With the present knowledge of the diseases owing to deficiency of vitamins, it is well, in all physical examinations, to inquire carefully as to the diet. If there is a weak heart, anemia, general muscular weakness, anorexia, neuritis, retarded growth, lesions of the skin, inefficient carbohydrate digestion and metabolism, keratitis,

cheilitis, stomatitis, gastroenteritis, or nervous cramps, one may well suspect a deficiency of one or more of the B vitamins, and every means should be brought into action to verify the truth or the falsity of the suspicion. The danger is not so much that the deficiency may be overlooked as that some other disease entity may be masked in the symptoms of vitamin deficiency and thus be overlooked. It must be remembered that the deficiency diseases develop in conjunction with other diseases and, while it is well to treat the deficiency as its symptoms require, the original basic disease should not be overlooked.

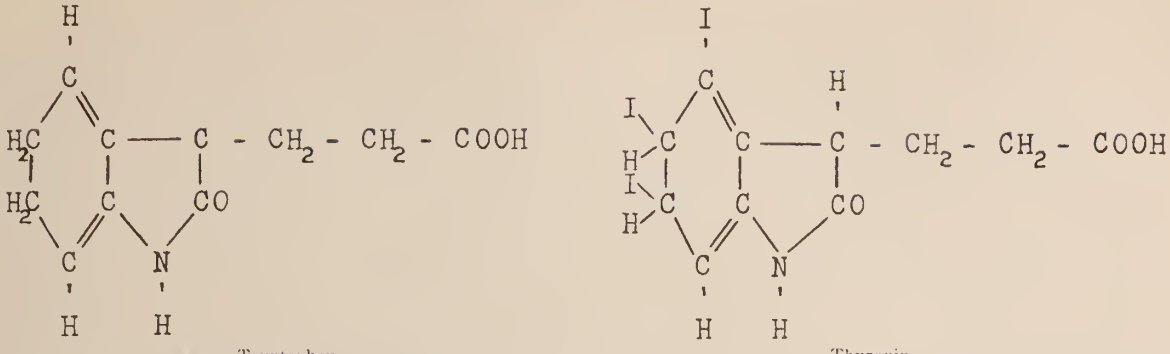
TREATMENT

The treatment of the diseases caused by vitamin deficiency is a simple matter in theory, but in fact these are among the most difficult cases to treat. He who attempts to treat them by theory without much experience in adjusting the treatment is doomed to great disappointment for there are many difficulties which beset the physician trying to treat these deficiencies. In the first place, persons suffering from such painful diseases as neuritis, cheilitis and other symptoms of these diseases want immediate relief and are unwilling to wait for the relief coming from treatment with vitamin. Then the dietary habits of these patients are to be changed, and this task approaches the impossible in many cases. This is a day of sweets and starches, of candies and pops, of cakes and pies, of beer and sandwiches, of easy meals at the expense of the essential nourishment of the body. The average person refuses to eat amply of the vitamin-containing foods. The lover of sweets refuses to give up his candy and pop. The alcoholic refuses to abstain from his drink. The factory worker continues to have his sandwiches and his beer, and the old lady living alone refuses to vary from her tea and toast. None of these factors may be the direct cause of a deficiency disease, but indirectly they keep the stomach satisfied so that the essential vitamin-containing foods are omitted. But the habits cannot be changed without much effort.

Then the physical condition of the person comes into the way. Bad teeth interfere with mastication. The condition of the alimentary tract may be such that the necessary foods cannot be digested, or the mental state may be such that there is too great fear of the necessary foods. I mention foods because it is not practical to keep patients on concentrates. Finally, the high cost of the concentrates prevents many from taking them in quantities sufficient for the best results. As to dosage of the concentrates, it is well to give enough. Poor results come most often from inadequate dosage. The experience of many experts indicates that there is little danger from excessive dosage.

In treating any one of the diseases owing to deficiency of the vitamins of the B complex, it is well to correct the deficiency indicated by aggressive treatment and to reinforce the doses of the needed vitamin with smaller doses of the other constituents of this complex. As I indicated, there seems to be overlapping of the action of the vitamins of this complex, and it is observed that many cases which do not yield to treatment with the vitamin indicated, do yield to therapy with the concentrates of other vitamins of this complex. Some of the symptoms of pellagra frequently fail to clear up following the use of nicotinic acid, but they may readily disappear after riboflavin concentrate has been added to the treatment. Pyridoxine and pantothenic acid sometimes serve similar purposes in treatment. When the cooperation is good, treatment with the indicated concentrate in ample doses and proper diet that includes the other concentrates may be sufficient. If the cooperation is satisfactory, this method may give more lasting results by establishing the better habit of diet while the patient is under treatment.

Some of the numerous morbid conditions listed under the diseases owing to deficiency of the vitamins of the B complex have been fully demonstrated to be caused directly and entirely by a deficiency of these vitamins, while others are not so well defined in their etiology. Careful observation leads to the conclusion that many of the diseases, due to other causes, are benefited by giving the vitamins of this complex freely. Even the infectious diseases and the severe traumatisms may be benefited in like manner. The reason for these benefits from the vitamins does not indicate that all of these diseases are due primarily to vitamin deficiencies. It does, however, indicate that the diseased person has become weak and depleted and that this condition has been made worse because of the altered diet to meet the disease condition; the vitamins are needed to supply the deficiency due to the altered diet. It seems most probable that there may be vitamin deficiencies in all of the diseases producing depleted condi-



Tryptophan Thyroxin

Observe the substitution of three iodine atoms for as many hydrogen atoms. Sherman[2] has shown that thyroxin can hardly be developed in the animal body except as it is supplied in the food and that the thyroid gland may atrophy in the absence of this amino acid. The vitamins serve as catalysts to activate the thyroid in making this chemical change from amino acid to hormone.

tions, and it stands to reason that correcting these deficiencies should increase the resistance thus enabling the patient to combat the other causative factors more readily, whether traumatic, infectious, or otherwise.

COMMENTS

It must be observed that the vitamins can hardly be classed as drugs in the true sense, but they should be classed as foods. They are essential to the maintenance of the body in almost the same sense as the amino acids. In fact, the vitamins of the B complex are related to the amino acids both chemically and physiologically. They all contain nitrogen, one of the essentials of the amino acids. Two of them, nicotinic acid and pantothenic acid, are carboxylic acids as are the amino acids. Thiamin and perhaps others of the B vitamins sometimes act as allergens as frequently do the proteins, which are but combinations of amino acids. About a generation ago leading scientific investigators discovered that some animals cannot live long without the amino acids tryptophan and lysine, which are not found in maize. Tryptophan is the basis for the formation of thyroxin and is essential to life, while lysine is related to pantothenic acid and is essential to growth. Here are deficiency states not unlike those due to the vitamin deficiencies. The work on amino acids was carried on for a time by those scientists who were willing to contribute their time for scientific and altruistic purposes; but, since there was little opportunity for commercial gain in this work, the efforts for furtherance of these investigations seemed to lag until they were practically discontinued. But the reverse seems to be the trend in the study of the vitamins, for they are more easily commercialized and thus induce the pharmaceutic manufacturers to spend much in scientific effort toward discoveries relating to these latter food essentials. These relationships, however, prove the similarity of the B vitamins to the amino acids.

Both amino acids and vitamins are essential to life and growth and are safe when given in reason. Some of the amino acids are the essential building stones of the hormones, while the vitamins serve as enzymes in the distribution of oxygen and as activating agents to the endocrine glands to assist in the production of the hormones, the governing agents of all the tissues of the body. These three, amino acids, vitamins and hormones form the tripod of life. The amino acids are developed mostly in vegetation, the vitamins of the B complex are produced entirely in vegetation and the hormones are developed entirely in the animal body. When these are in balance in the body, the organs are physiologic in their functions, but, when they are out of balance, there develop pathologic phenomena called disease.

These observations call for readjustment of the dietary to meet the conditions described. This dietary will be ever changing to keep pace with the scientific developments. Even with the present knowledge, one must adjust diet generally and individually with much lack of essential knowledge; but, when the electronic microscope is perfected to the extent that it is possible to observe the protons and electrons adjusting themselves into positions to form the atoms, these atoms arranging themselves into positions to make up the molecules, and the molecules taking up their proper places side by side in mass formations as crystalloids and colloids, then and then only will one be able to adjust the perfect dietary for man.

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THE USE OF VITAMIN B IN THE TREATMENT OF THE TOXEMIAS OF LATE PREGNANCY

BEN F. HART, M. D.
WINTER PARK

Antepartum vitamin therapy is usually routine in well ordered private practice, but is limited because of costs in most clinics to those patients who have definite physical changes that are diagnostic of avitaminosis. The subclinical phase usually goes unnoticed, or is diagnosed as some other entity.

At present over a dozen components of the vitamin B complex have been identified. Three are known to be essential to human nutrition, namely, thiamin, nicotinic acid and riboflavin. Pyridoxine (B_6) and pantothenic acid are known to be essential in certain mammals and birds, but their role in human physiology has not been clarified. Deficiency of any of the first three gives rise to certain symptoms, the physiologic phase, which is followed in varying lengths of time by certain characteristic anatomic changes. The vitamins form part of the enzyme chains which carry on intracellular metabolism. They work in an integrated fashion; each is necessary in certain steps of the dismutation and oxidation of intermediate metabolities.

Vitamins are expendable commodities and must be replenished regularly. For optimum effect they should be administered simultaneously since it has been fairly definitely shown that large doses of one tend to deplete the others. If actual deficiencies exist, adequate therapeutic doses should be administered until the symptoms have abated, and then a maintenance dose should be continued. Metabolic increases or perversions, whether due to infection, thyroid disease or pregnancy, make greater demands on the intracellular respiratory system, and consequently more vitamins are needed.

It seems rational since it has been shown that from 6 to 50 per cent of all pregnant women have some form of avitaminosis, that the toxemias of late pregnancy may in some way be related to vitamin deficiency. There have been several reports of conflicting nature as to the value of vitamin therapy in the treatment of these conditions.

In this study prepared tablets containing the following components in the given proportions were used: thiamin hydrochloride, 5 mg.; riboflavin, 5 mg.; nicotinamide, 25 mg.; pyridoxine hydrochloride, 5 mg.; and calcium pantothenate, 25 mg. This preparation will hereinafter be designated as TRN6P. In addition to this combination tablet, individual component tablets were used singly and in combinations.

HYPERTENSION IN LATE PREGNANCY

A group of 35 treated cases and 15 control cases of hypertension occurring in late pregnancy was followed fairly satisfactorily. I attempted to eliminate, as far as possible, patients who had an elevated blood pressure in early pregnancy, thus avoiding inclusion of patients with essential hypertension and some with chronic nephritis. Also, patients with elevated nonprotein nitrogen or other evidences of disease of the kidney were eliminated. I did not attempt to make any limitations on the basis of previous pregnancies. No doubt some arteriosclerotic patients were included. The presence or absence of albumin in the urine was not a satisfactory criterion since the patients were ambulatory and catheterized specimens were not readily obtained. Neither were those patients included in whom a fulminating toxemia developed. There was one such instance among the treated patients and one among the controls. As weight variations were unsatisfactory, blood pressure changes were used as the sole criterion in determining the progress of the patient.

The average length of the period of observation was 33.3 days for the controls and 25.2 days for the treated patients. This can probably be explained by the fact that no patient who was treated received vitamins on her first visit to the clinic lest nervousness cause elevation of the blood pressure, which would subsequently be wrongly interpreted. The patients were seen from one to three times a week, depending upon the severity of the symptoms.

The average number of children borne by the control group was 2.86 each and by the treated group 3.08 each. There did not seem to be much relation between age and parity in regard to response to treatment. The women in their first and second pregnancies did, however, seem to respond a little better.

Read before the Louisville Obstetrical and Gynecological Society, Jan. 26, 1942.

I wish to acknowledge the advice and cooperation of Drs. V. P. Sydenstricker and Richard Torpin in the early phases of this study.

The TRN6P tablets are experimental products of Merck & Co., Inc.; this firm also furnished some of the individual vitamin components used in this work.

At the beginning of the period of observation the average systolic blood pressure for the controls was 142.6 and the diastolic 73.7. The patients to be treated had an average blood pressure of 145.9 systolic and 85.1 diastolic. All patients, regardless of whether they were to be used as controls or be given vitamins, were advised to abstain from the use of table salt.

At the end of the period of observation, the blood pressure of the controls averaged 151 systolic while that of the treated patients averaged 144 systolic. The diastolic pressures were 92 to 96 and 85 respectively. In other words, the blood pressure of the controls had risen an average of 8.4 mm. of mercury systolic and 18.9 mm. diastolic, while the systolic pressure of the treated patients had dropped 1.9 mm. and the diastolic pressure had remained constant.

Treatment consisted, as previously mentioned, of a salt-free diet for both groups. The treated patients received components of the vitamin B complex in addition. Eighteen, or roughly half, of the group received TRN6P tablets, one after meals. Of these, 9 received, in addition, 50 mg. of nicotinic acid, three times a day; the remaining 9 received only TRN6P. Of the 17 other patients in this group, 3 received vitamin B_1, 15 mg. a day; the remaining 14 received nicotinic acid alone, 150 mg. a day.

The best response occurred among those receiving the TRN6P tablets, either with or without additional nicotinic acid. In this group the average improvement was 3 mm. of mercury in the systolic pressure and 2 mm. in the diastolic pressure, while for those receiving nicotinic acid alone the systolic pressure averaged 2 mm. higher than at the beginning of the treatment and the diastolic pressure 3.5 mm. higher.

Many of the patients showed improvement in that they experienced a sense of well-being after starting treatment, even though the blood pressure remained elevated. Increased appetite and increased intake of food made the control of weight difficult.

Groover studied a series of 98 controls and 102 treated patients who received vitamin B syrup orally during the antepartum period. He reported that 2 cases of mild toxemia occurred among the patients receiving the vitamin therapy and that among the controls there were 2 severe and 4 mild cases of toxemia. A somewhat lower blood pressure was observed in the treated patients than in the controls. One Japanese investigator flatly stated that avitaminosis owing to a deficiency of vitamin B is the cause of the toxemias occurring in the late period of pregnancy. In this limited series, the results did not justify the belief that vitamin B components were of great value, once the hypertension had manifested itself.

ECLAMPSIA

Vitamin B components were used in the treatment of 6 patients with eclampsia. None of these had received previous vitamin therapy in antepartum care. They had from 1 to 8 convulsions prior to hospitalization. All were comatose. Each received parenterally a hypertonic solution of glucose and magnesium sulfate, plus paraldehyde rectally. In addition, 100 mg. of thiamin chloride, 100 mg. of sodium nicotinate and 10 mg. of riboflavin were given intravenously. The sodium nicotinate must be given very slowly to prevent unpleasant reactions, preferably in the 20 per cent glucose solution. Two of the 6 patients had 1 or more convulsions after admission and they were given an additional dose of the vitamins four hours after the first. None of the patients remained comatose longer than eight hours, and they appeared brighter than a similar group of controls who received the same treatment except for the vitamins. Two of the controls who had 3 to 6 convulsions respectively, were comatose twenty-four and forty-eight hours after admission.

This series is too small to permit conclusions and is only submitted so that this therapy may get a wider trial than our limited material permits. It is interesting to note that workers in psychiatry give thiamin with good results to their patients who remain comatose after having had convulsions in the course of treatment with insulin.

SUMMARY

1. Vitamin B apparently has little effect on the hypertension of late pregnancy once it is established.

2. Six patients with eclampsia who received vitamin B components in large doses intravenously seemed to recover from postconvulsive stupor more rapidly than a similar group of controls.

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THE USE OF THE MILLER-ABBOTT TUBE IN THE MANAGEMENT OF ILEUS

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TAMPA

The treatment of ileus by intestinal intubation and continuous mild suction was popularized by Wangensteen,[1] who made his first report in 1933. He adopted this method of treatment after making the clinical observation that not infrequently the continuity of the bowel spontaneously reestablishes itself after simple ileostomy although only a small volume of fluid and gas escapes. As this measure merely amounts to a decompression, he felt that an indwelling duodenal catheter with continuous mild suction would serve the same purpose.

Although a majority of physicians are familiar with the so-called Wangensteen drainage, in most instances it has not been used as described by the originator. Wangensteen[1] stressed the passage of the tube into the duodenum, the application of continuous mild suction and repeated roentgen examinations, not only to determine the position of the tube but also the progress of the decompression. Usually no effort has been made to get the tube into the duodenum, and roentgen examinations have been dispensed with. The tube has consequently remained in the stomach. Nevertheless, its presence there has not infrequently brought about good results, but not in as high a percentage of cases as when the procedure is carried out as directed by Wagensteen.[1] A review of some of the experimental work of the last ten years casts light on the reason.

The distention of the bowel in intestinal obstruction is due to a collection of gas and fluids in the bowel proximal to the obstruction. A partial low grade obstruction can become complete because of the edema of the mucosa produced by the approach of the pressure within the lumen of the bowel to the pressure of the veins within the intestinal wall, thus blocking the venous return. Relief of this pressure is followed by an adequate venous return and, consequently, disappearance of the edema and a reestablishment of the lumen of the bowel. It is this fact that makes possible the relief of obstruction by intestinal intubation and suction.

But how can a tube in the stomach, or even in the duodenum, relieve the pressure several feet down the small bowel? The fluids within the intestine are derived from the digestive glands and in amount they total about 7,000 cc. in twenty-four hours. This quantity is derived as follows: secretion from the salivary glands about 1,500 cc., gastric juice 2,000 to 3,000 cc., bile 300 to 500 cc., pancreatic juice 300 to 500 cc. and intestinal juice 3,000 cc. There are three possible sources for the gas, namely, (1) gas formed in the process of digestion, (2) gases diffused into the intestine from the gases of the blood and (3) swallowed air. Experiments show that 68 per cent of the total amount of gas is due to swallowed air and that the remaining 32 per cent is derived from the other two sources. Of the latter, 70 per cent is derived from gases diffused from the blood, and the remaining 30 per cent arises from the process of digestion. This proportion is true only of the small bowel as in the large bowel the gas is not influenced materially by swallowed air. It is at once obvious why suction applied to a tube even in the stomach would meet with moderate success since 50 per cent of the fluids and 68 per cent of the gas would thus be prevented from entering the bowel.

Just as success can be explained so can the failures. Physical laws governing the behavior of gases and liquids mixed in a tube cast light on the subject. If a coiled rigid tube is filled with either gas or fluid and one end closed, nothing can be withdrawn from the open end on the application of suction unless enough suction is applied to collapse the tube. If, however, the end is left open, little suction is required to evac-

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uate it completely. If a coiled collapsible tube is filled with either a liquid or gas and suction is applied to one end, it is readily emptied whether the other end be open or closed. If, on the other hand, the tubes are filled with a mixture of fluids and gases, little of the contents will escape following the application of suction regardless of whether the ends are open or closed, or whether the tubes are rigid or collapsible. The obstructed intestine being a coiled collapsible tube filled with gas and fluids, it is at once obvious why suction applied to a catheter in the duodenum would not completely empty it of its contents.

To augment this type of therapy Abbott and Johnston[2] tried the Miller tube. This tube, developed by Miller[3] for the purpose of studying the intestinal secretions of man, is now referred to as the Miller-Abbott tube. It consists essentially of a double channel tube; the lumen of one channel empties into a balloon which may be inflated and deflated at will, and the other is open for the withdrawal of the intestinal contents. When the tube reaches the duodenum, the balloon is inflated and the tube dragged down the bowel by peristaltic action. In intestinal obstruction the peristaltic action returns to a segment of the intestine as soon as it has been emptied, and the tube is then carried into the next loop. Thus the entire intestine proximal to the obstruction can be emptied. This measure is frequently sufficient to give permanent relief.

In those cases in which relief is not given, it is possible to determine accurately the location of the obstruction, and not infrequently the exact nature of it can be predicted by the injection of a small amount of barium into the tube. In those cases that finally come to operation, the patient is in better condition, and the operation is more easily performed because of the absence of distention.

The difficulty with this method of therapy has been in getting the tube from the stomach into the duodenum. Numerous methods have been recommended, none of which has been too successful. In my experience if the tube can be placed in the pyloric end of the stomach, it will pass without difficulty into the duodenum if the patient remains on the right side. To facilitate placing the tube in this position a small lead sinker is tied to the end of the tube to make it heavier so that the position of the tube can be controlled by gravity or by arranging the position of the patient. In placing the end of the tube in the pylorus both bedside roentgenograms and the fluoroscope are used. The latter is by far the more satisfactory.

As soon as the tube is in the duodenum, the balloon is inflated, and suction is applied. The tube then begins to pass down the intestine, and it is emptied as it progresses. During this period the patient must be examined repeatedly both physically for signs of strangulation and roentgenographically to observe the progress of the tube and of the decompression.

The same physiologic changes take place with the withdrawal of the intestinal contents by means of the various types of tubes as take place when they are lost by vomiting or through a high intestinal fistula and they must be combatted in the same way. With loss of the chlorine ion there develop a high nonprotein nitrogen content of the blood, a low chloride content and an alkalosis as evidenced by a high carbon dioxide combining power. This condition is treated by the administration of normal salt solution. A simple way to determine the amount necessary is to measure the fluid withdrawn and give an equal amount of this solution. The late changes produced by the loss of these fluids are acidosis, due to incomplete combustion of fats from lack of glucose, and a hypoproteinemia. The former is prevented or corrected by the giving of glucose solution. The latter can only be treated by blood transfusions, or transfusions of serum or plasma. The administration of saline solution makes this condition worse. Infusions with the amino acids are at the present in the experimental stage, and further work is necessary to determine those essential for the synthesis of protein in the body.

The Miller-Abbott tube is a new agent in the armamentarium of the clinician in the treatment of intestinal obstruction. Its limitations have not been definitely determined. It is hoped that its injudicial use will not throw it into disrepute before its place is definitely determined.

Those who have been intimately connected with the development of this treatment have stressed its limitations and have urged caution. For this reason it is probably wise to state the contraindications before discussing the indications. This method should never be employed when interference with the blood supply is a possibility. Strangulation is suspected in cases of intestinal obstruction when localized tenderness of the abdomen is present, or when pain is constant rather than intermittent. It is due to

the escape of blood into the abdomen. This does not occur in intussusception, a type of strangulation in which the strangulated portion is not free in the peritoneal cavity. The signs in cases of this type are mucus and blood in the stools, and a mass can frequently be felt. The use of the tube is always contraindicated in obstruction of the large bowel. The contents of the lower portion of the intestinal tract are too thick to be removed with the tube, and there is a definite danger of perforation of the large intestine due to the distention, the pressure being high because of the ileocecal valve.

The indications for therapy by means of intubation occur in all cases of ileus, whether due to intraabdominal or extraabdominal disease, that resist the usual conservative measures employed in its treatment, and in which there are no indications for immediate operation. Wangensteen[1] stated that he hesitated to intubate in a case of ileus without the presence of a scar on the patient's abdomen, that is, in a case that is probably not due to adhesions. Use of the Miller-Abbott tube will in all probability replace ileostomy in the management of intestinal decompression preparatory to other surgery and in relieving tension on the postoperative suture line after intestinal resection.

In the treatment of so-called paralytic ileus of diffuse peritonitis intestinal intubation has proved a valuable adjunct. In cases of this type and in those designated as paralytic ileus owing to extraabdominal disease the progress of the tube through the intestinal tract is no slower than in cases of ileus of mechanical origin, the tube moving steadily as the distention of the various loops is relieved. The distention is, therefore, not due essentially to a paralysis, and the term paralytic ileus is a misnomer. Obstruction of the intestinal tract developing during the first two weeks after abdominal surgery is due to fibrinous adhesions which will be largely absorbed. Tube therapy should relieve this condition in a vast majority of cases of this type. It is felt by some that the absorption of these adhesions is enhanced by the use of the tube. The end results in cases so treated have been just as satisfactory as those in cases treated by enterostomy without further operative intervention.

The following cases are illustrative of some of the various types of ileus that have responded to this type of therapy.

REPORT OF CASES

Case 1.—Early Postoperative Obstruction: A white woman 26 years of age was first seen on Nov. 30, 1940, eleven days after her third abdominal operation, which was performed because of partial intestinal obstruction due to adhesions. The patient was acutely ill. She was nauseated and vomiting, and the abdomen was greatly distended. The symptoms, ushered in by abdominal cramps, had begun forty-eight hours before. After examination it appeared that even an enterostomy under local anesthesia would probably be too much for her, and intestinal intubation was tried. Following the entry of the tube into the duodenum the improvement was rapid, and about forty-eight hours later the patient had a spontaneous bowel movement. The tube was removed on December 5. The patient was symptom-free in August 1941.

Case 2.—So-Called Paralytic Ileus and Pneumonia: A white woman 63 years of age was hospitalized for pneumonia following influenza. There developed severe abdominal distention, which resisted all therapy and grew steadily worse, hindering the already embarrassed respiration. On examination, the abdomen was greatly distended, tympanitic and silent. The patient was critically ill, and respiration was definitely embarrassed. The Miller-Abbott tube was passed without difficulty, and its progress was certainly as fast as in any case that I have treated. Improvement was rapid, and there was a spontaneous bowel movement forty-eight hours after its insertion. The tube was removed at the end of seventy-two hours.

Case 3.—Late Postoperative Intestinal Obstruction Due to Adhesions and Invasion of the Small Bowel by Pelvic Malignant Disease: A white woman 60 years of age was examined in May 1941. Signs and symptoms of partial intestinal obstruction of about six weeks' duration were present. A hysterectomy had been performed in 1939 because of bleeding, and a biopsy of the cervix in December 1940 had revealed the presence of a carcinoma. On examination in May 1941 a large pelvic mass was felt, and apparently there was obstruction in the rectosigmoid.

The patient was admitted to the hospital. After the administration of a barium enema, examination failed to reveal an obstruction in the rectosigmoid. Several days later while she was still in the hospital, complete obstruction developed. Intubation relieved the distention, nausea, vomiting and pain. The progress of the tube ceased after May 13, at which time barium was injected into the tube in an effort to determine the point and nature of the obstruction. This attempt was not successful as the tube had not reached the point of obstruction.

The patient was operated upon with the tube in place. The intestines were not distended at operation, but were gathered on the tube like a curtain on a rod, actually reducing the abdominal contents. The obstruction was due to the malignant disease of the pelvis and to adhesions. An ileocecostomy was performed, and the tube was left in place to prevent distention. It was removed on the fifth postoperative day. The patient is living, and there are no signs of intestinal obstruction.

Case 4.—Late Postoperative Intestinal Obstruction: A white woman 27 years of age was examined on June 17, 1941. She had been operated upon at the age of 13 for perinephritic abscess on the right side which healed and broke down repeatedly. In 1939 the sinus in the right flank was injected with opaque material, and the cecum was filled through the appendix. Following an appendectomy in June of that year the sinus closed, and she was well until June 14, 1941, when she experienced abdominal cramps, nausea and vomiting. Three days later, when the patient first came under my observation, she was in a comatose condition, the abdomen was tremendously distended, and the temperature was 105 F. Following decompression her condition improved rapidly. There was a spontaneous bowel movement on June

20, and the tube was removed the next day. She has remained well since that time.

Case 5.—So-Called Paralytic Ileus and Acute Disease of the Gallbladder: A white woman 69 years of age, who had had indigestion for years with attacks of colic in the right upper quadrant of the abdomen, was examined on Aug. 5, 1941, because of an attack that had begun several days before. Nausea and vomiting had become progressively worse, and the abdomen had become increasingly distended. She was definitely jaundiced and acutely ill. The temperature was 104 F., and she was in a semicomatose condition.

A diagnosis of acute cholecystitis with the probability of stones in the common duct was made. The Miller-Abbott tube was passed, and the progress was satisfactory. The condition of the patient improved slowly. She was discharged from the hospital on August 17 with instruction to return for an operation when she became stronger. She was operated upon successfully on September 6 at the beginning of an attack. A chronically infected gallbladder and twelve stones from the common duct were removed. The patient is now living and well.

Case 6.—Intestinal Obstruction and Carcinoma of the Large Bowel: A white woman 70 years of age was first seen in August 1941 because of what was thought to be an acute attack of gallbladder disease. Conservative therapy was elected. The abdomen was slightly distended, and treatment was successfully carried out by placing a catheter in the stomach and applying suction. No effort was made to place the catheter in the duodenum. Recovery was uneventful. Complete examination of the intestinal tract, made by her physician, revealed a carcinoma of the ascending colon probably involving the cecum. On September 9 she began to show signs of obstruction, and two days later there was definite obstruction. Because of the age and the poor condition of the patient, and the probable fixation of the cecum, preventing a cecostomy, intubation was elected as the treatment despite its contraindication in obstruction of the large bowel. The tube passed into the duodenum and progressed satisfactorily. The patient's condition improved greatly. Her surgeon, who had been out of the city, returned in the meantime and operated. He found an organic lesion obstructing the cecum and ascending colon, which was not resectable. An ileocolostomy was performed, and the tube was left in for decompression instead of making an ileostomy. The patient is now symptom-free.

Case 7.—Abscess of the Lesser Peritoneal Sac and So-Called Paralytic Ileus: A man 65 years of age in the spring of 1941 visited the Mayo Clinic where a diagnosis of chronic cholecystitis was made and an operation was advised, but refused. Immediately after his return he had an attack of acute abdominal pain and was desperately ill. He recovered slowly, and before he was fully well, another acute attack developed, the progress of which was slow. When he was admitted to the hospital, the abdomen was greatly distended, and the Miller-Abbott tube was passed. It repeatedly passed to the left after entering the stomach, and from its position a diagnosis of abscess of the lesser peritoneal sac was made. Although the tube did not leave the stomach the application of suction gave relief. Following relief of the distention a mass was palpable in the epigastrium. When the patient's condition did not show continued improvement, an operation was performed. A subacute gallbladder was removed, and an abscess of the lesser peritoneal sac was drained. The patient died of heart failure forty-eight hours postoperatively.

SUMMARY

The intelligent use of the Miller-Abbott tube for intubation of the small bowel in cases of ileus has definite therapeutic and diagnostic value in a limited number of cases. Indications and contraindications for its use are discussed. Seven illustrative cases are presented.

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311 Citizens Building.

PROVISIONS FOR THE PUBLIC HEALTH IN THE FLORIDAS UNDER THE ADMINISTRATION OF GOVERNOR ANDREW JACKSON IN 1821

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In July 1821, Major General Andrew Jackson, under appointment by President Monroe as commissioner and governor, took over from the Spanish authorities the administration of the two provinces of East Florida and West Florida. These provinces thereupon came under the sovereignty of the United States.

By the terms of the treaty of cession, and pending the organization of civil government in the Floridas by an act of Congress, the laws of Spain which were applicable to the two provinces remained in force. For certain necessary regulations, however, of matters not covered by the Spanish laws, Governor Jackson exercised the wide powers which had been conferred upon him to promulgate a series of "ordinances" which had the force of law. For the three months of Jackson's administration of the Floridas the seat of government was at Pensacola, in West Florida. The ordinances were dated and issued at that place, but they were also published at St. Augustine in a form which made them applicable to East Florida.

On assuming the functions of government, one of Jackson's first concerns was to protect the health of the population of Pensacola and St. Augustine. This concern was given extended expression in his second ordinance. As there is but one single copy in existence of the pamphlet in which it was published at St. Augustine,[1] and also

Chairman, Special Committee on Library Holdings, Committee on Historical Source Materials, American Historical Association.

[1]The unique copy of this pamphlet is in the Library of Congress, Washington, D. C. The ordinance in question was also printed in the *Florida Gazette*, St. Augustine, September 1, 1821. The only known copies of issues of this newspaper are also in the Library of Congress.

but one single copy of the broadside in which it was published at Pensacola,[2] it is here reprinted in full, from the St. Augustine pamphlet, for the first time in one hundred and twenty years.

No. 2. An Ordinance, For the preservation of health in the City of St. Augustine, by Major-General Andrew Jackson, Governor of the Provinces of the Floridas, exercising the powers of the Captain-General and of the Intendant of the Island of Cuba, over the said Provinces, and of the Governors of said Provinces respectively.

Section I. That every vessel arriving between the first day of June, and the last day of October, in each year, from any port between the Equator and thirty-three degrees North latitude, shall be brought to at such point as the Board of Health may direct, and there perform a quarantine of twenty-four hours at least, and as much longer as the Health-officer and Board of Health may deem necessary; not exceeding forty days.

Section II. That there shall be established a Lazaretto, at such point as the board of health may direct, for the accommodation of the sick, under such regulations as the board of health may from time to time establish; and that until the Government of the United States shall establish a public Ware-house at such Lazaretto, the cargoes, or such part thereof, as the Health-officer and Collector of the port of St. Augustine may deem necessary, shall be stored under the direction of such officer as the board of health may direct.

Section III. That the Quarantine Grounds shall be established within such limits as the board of health may direct; and that any person or persons belonging to, or having had communication with any vessel or vessels under quarantine, who shall pass those limits, without permission first had and obtained from the resident Physician, or health officer, shall forfeit and pay the sum of one hundred dollars, and be imprisoned in the common jail for a term not exceeding six months.

Section IV. That for the more effectually guarding against the introduction of disease, there shall be established a Board of Health, which for the present shall consist of an officer to be appointed and called the Resident Physician, and the Mayor and Aldermen of St. Augustine, (over whom the Resident Physician shall preside,) who are by this ordinance authorized to make, and from time to time alter, such laws and regulations as they may deem necessary to ensure the health of the city.

Section V. That there shall be a Health-Officer appointed, and stationed at such point as the Board of Health may direct, whose duty it shall be to board every vessel bound inwards, to see that the provisions of this Ordinance and all such regulations as the Board of Health may make, are strictly complied with; and to report from time to time, as occasion may require, to the Board of Health.

Section VI. That such allowances shall be made to the Resident Physician and Health-Officer, (all their services included) as shall not exceed one dollar and one half for each person on board of each vessel, to be regulated and determined by the Mayor of St. Augustine, who is authorized to receive from every vessel, the cargo of which it may be necessary to land and store, such other and further sums, as may be necessary to cover all expenses incident to the same.

Pensacola, July 19, 1821.

ANDREW JACKSON,
Governor of the Floridas &c. &c. &c.

By the Governor,

W. G. D. WORTHINGTON,
Secretary, &c. for East-Florida.

St. Augustine, Aug. 20, 1821.

[2]Unique copies of the Pensacola broadsides containing this and other ordinances by General Jackson are preserved among the State Department papers in the National Archives, Washington.

The same ordinance was also published in a broadside at Pensacola, with slight differences here and there in punctuation and spelling, and also with differences required by conditions at the West Florida port. For example, in Section 1, vessels arriving at Pensacola were to be "brought to at Barrancas, or at such other port as the Board of Health may direct:" in Section 2, the lazaretto at Pensacola was to be established "at the Barrancas, or at such other point as the Board of Health may direct;" in Section 3, the Pensacola "Quarantine limits shall be cannon-shot-range or two miles in a direction towards the harbor from Fort St. Carlos de Barrancas, or at such point as the Board of Health may direct;" and in Section 5 the health officer is to be "stationed at the Barrancas, or at such other point as the Board of Health may direct."

At Pensacola, this ordinance, in common with other ordinances issued there in broadside form, was accompanied with a Spanish version parallel with the English. At St. Augustine the Spanish versions of this and other ordinances, so far as they have been found at all, are found in some of the few surviving issues of the *Florida Gazette.*

Another of Jackson's ordinances dealing with the important subject of public health has been found only in one of the Pensacola broadsides and also in the columns of the fourth issue (September 8, 1821) of *The Floridian,* the first newspaper published at that place. It was undoubtedly published at St. Augustine also, with appropriate changes to apply to the East Florida town, but no copy of its publication there has been found. In the Pensacola broadside it appeared in English and Spanish. The English text, under a heading which repeats the formal statement of General Jackson's powers, is as follows:

AN ORDINANCE EXPLANATORY OF THE ORDINANCE FOR "THE PRESERVATION OF HEALTH IN THE CITY OF PENSACOLA."

Whereas, it is of the first importance to the health and prosperity of the city of Pensacola, that no persons but such as are properly qualified and licensed, should be permitted to practice medicine in the said city, (and such having been the law in these provinces under the late government of Spain,) and in order to remove all doubts respecting the powers of the Board of Health, it is therefore—

1. *Ordained* and declared, that the Board of Health possess full power[3] to regulate the practice of medicine in the city of Pensacola, and to establish rules and regulations for that purpose, and grant licenses to such persons as may be found qualified to practice.

[3]As printed in *The Floridian,* the words here are "free power."

2. It is further ordained, that Dr. Voorhees, Health Officer, and Doctors Elliott and Merrill of the United States army, be added to the Board of Health.

Done at Pensacola, this 6th day of September, 1821.

(Signed) Andrew Jackson.
By the Governor:
Geo. Walton,
Secretary of West Florida.

We learn more about these early provisions for the health of Pensacola from the columns of some surviving issues of *The Floridian.* In the issue of September 8, 1821, we find the following:

At a meeting of the Board of Health for the City of Pensacola, on the 6th day of Sept. 1821—It was ordained that Dr. Christopher Y. Fonda having complied with the ordinance of the Board of Health "regulating the practice of medicine," and upon examination being found duly qualified to practice medicine and surgery and being of correct moral character, be licensed accordingly.

The following ordinance was then made and unanimously adopted by the board, to-wit:

AN ORDINANCE

Of the Board of Health further to regulate the practice of Medicine and Surgery in the City of Pensacola, & more effectually to prevent impositions upon the public, by excluding from the practice all such as are not qualified.

Sec. 1. *Be it ordained,* That if any person or persons shall prescribe or administer medicine or attempt to practice surgery in the City of Pensacola (except in his or their own family), without previously having obtained a license, shall in each case pay the sum of fifty dollars, one half to the use of the informer, the other half to the use of the board of health, to be recovered in an action of debt, in the name of the board of health, before any justice of the peace, or other court having jurisdiction thereof, and he or they so offending upon conviction thereof shall stand committed to the common jail & there remain until the same be paid.

Sec. 2. *Be it further ordained,* That there shall be established a "Board of Medical Censors," which for the present shall consist of the resident physician of Pensacola, the health officer and Doctors Elliott and Merrill of the United States Army, who shall examine into the medical qualifications and moral character of all applicants for license and report in writing to the board of health all those whom they may deem qualified to practise medicine and surgery, who shall thereon be licensed upon paying to the secretary the sum of five dollars.

Sec. 3. *Be it further ordained,* That it be recommended to his excellency the Governor, to commission as members of the board of health, Dr. Voorhees, health officer, and Drs. Elliott & Merrill of the U. States army.

Sec. 4. *And be it further ordained,* That the board of medical censors before entering on the duties of their office shall take the following oath to be administered by the mayor of Pensacola—"We do solemnly swear that all applicants for license to practice medicine and surgery in the city of Pensacola shall be examined without favor, partiality or affection, and in our reports to the board of health, we will strictly set forth their medical qualifications and moral character to the best of our knowledge and belief. ["]

By order of the Board of Health,

J. C. Bronaugh,
Resident Physician & Prest. B. Health.
Attest—D. Shannon, Sec'y.

Another ordinance of the Pensacola Board of Health has been found only in *The Floridian* of September 29, 1821, vol. 1, no. 7. Its text is here put on record as follows:

AN ORDINANCE

Of the Board of Health, in relation to Quarantine, and the prevention of Disease in the city of Pensacola.

Sec. 1. *Resolved,* that the board of health will for the present establish the "quarantine ground" at the Navy Cove, on the East side of the Bay of Pensacola, where they will erect a house for the reception of the sick. The limits of the quarantine ground shall extend from Deer Point, to the first Yellow Bluff to the East of the Navy Cove boundary; and no vessel shall come nearer to the city of Pensacola, than half a mile from these limits, until the master of such vessel shall have obtained the certificate of the health officer, that she has been examined and permitted to pass.

Duties of the Resident Physician.

Sec. 2. It is his duty to preside at every meeting of the board of health, and use every exertion in his power for the adoption of such rules and regulations, as may conduce to the preservation of the health of the city.

To visit all such persons as are reported by any physician of the city, to be afflicted with any malignant, infectious, or pestilential disease, and all others, which from any evidence, he may believe to be so afflicted, and report his opinion of the case to the board.

To visit vessels at the quarantine ground, on board of which the health officer may report any case of malignant, infectious, or pestilential disease, when in his opinion it shall be necessary, or the board of health shall direct.

To visit and inspect every vessel that comes to anchor in the Bay of Pensacola, which has been subjected to perform quarantine by the health officer; receive from the masters the certificates, or passports, granted by the health officer at the quarantine ground, and see that they are in strict conformity with the cleanliness of the vessel, the number of persons on board, their health, &c. —Require answers on oath, to all questions which he may think it necessary to put, in relation to the health, or cleanliness of the vessel, if he should deem it necessary; and report to the board every thing concerning such vessel, which he may consider it important for them to know.

To visit and inspect, whenever he may think it necessary, or the board of health direct, from the first day of June, to the last day of October, every vessel in port, and report their condition.

And it also shall be his duty, to furnish all persons acting in, or connected with his department, copies of all ordinances of the board of health, and such instructions as may be necessary for the better executing the same.

The Duties of the Health Officer.

Sec. 3. He shall attend at the quarantine ground immediately upon the arrival of any vessel there, and as often besides as the board of health may direct.

It shall be his duty to board all vessels, as soon as practicable, after their arrival there; to examine into the state of health of all persons on board, and into all events connected with the health of the crew during the voyage; the number of deaths that occurred on board, and require answers, on oath, to all such questions as he may put on these subjects, or as to the cleanliness of the vessel.

To stop and detain all vessels subject to quarantine, and the persons on board, agreeably to the ordinance for the health of the city, and the regulations and instructions, which he may from time to time receive from the board of health.

To make a minute examination of all vessels, and if foul, or infected, to subject them to quarantine until unladened and cleaned.

To subject all vessels from any port between the equator and thirty three degrees of north latitude, to perform at least twenty four hours quarantine.

To report without delay to the board of health, the condition of every vessel which he boards; the number of persons on board, their health, &c. during the voyage; number of sick, their diseases, &c. with the time which he may think it necessary to subject them to quarantine.

And also to place in the quarantine hospital, to be established at the quarantine ground, all persons who may

require medical aid, and bestow upon them every attention in his power.

Of the Duties and Obligations of the Masters, Passengers and Crew of Vessels, and of Pilots in Relation to Quarantine.

Sec. 4. Every vessel bound to Pensacola, shall proceed directly to the Navy Cove, and there come to anchor; and shall submit to such search as the health officer shall require; and the crews shall assist in unloading, cleaning, and purifying such vessels, whenever ordered by the health officer. The master, his officers, crew and passengers, shall, on oath, make true answers to all questions put to them, respectively, by the said health officer, in relation to any matters touching the health of the crew, and passengers, the cleanliness of the vessel, &c. and every person refusing to answer, shall forfeit *Three hundred dollars,* to the board of health.

No vessel shall leave the quarantine ground, without having the certificate of the health officer, that such vessel has been examined, and suffered to pass, which, provided such vessel has been directed to perform quarantine, by the health officer, shall be delivered to the resident physician, upon his visiting her in the Bay of Pensacola, previous to which she will not be suffered to unload; and the master of any vessel offending against this article, shall forfeit *three hundred dollars,* and then be subject to such regulations as the board of health may think proper to impose.

Every person who shall go on board of any vessel, while performing quarantine, without permission of the board of health, or health officer, shall forfeit the sum of *fifty dollars.*

Every pilot, or any person acting as such, shall deliver to the master of every vessel he shall board, inward bound, one copy of this ordinance, which shall be furnished him by the board of health; and any pilot refusing or neglecting so to do, or aiding in landing any passenger, or other person, subject to quarantine, shall forfeit *one hundred dollars* for every offense.

All persons who may be conveyed to the quarantine hospital, shall be liable to pay for the expenses of their attendance and support, to be recovered by the board of health.

Of the Sums to be Paid by Each Vessel, and Person, Arriving in the Port of Pensacola.

Sec. 5. Every vessel arriving by sea from any port of the United States, or from the ports of Spain, or her colonies direct, laden only with the productions of Spanish growth or manufactories, shall pay, viz.—If of one hundred and sixty tons, or upwards, *six dollars;* if under one hundred and sixty, and above one hundred tons, *five dollars;* if under one hundred tons, *three dollars,* for every voyage, excepting the vessels from the states of Louisiana, Mississippi, and Alabama, which shall not pay oftener than once in three months.

Every vessel arriving from any other port, shall pay, if of one hundred and sixty tons, or upwards, *ten dollars;* if under one hundred and sixty tons, and above one hundred, *six dollars;* if under one hundred tons, *three dollars.*

Every master of a vessel arriving by sea from a port in the U. S. or direct from Spain, or her colonies, shall pay for himself *one dollar and a half;* for every cabin passenger, *one dollar and a half;* for every seaman and steerage passenger, *one dollar*: and if arriving from any other port, for himself and every cabin passenger, *two dollars* each; for every seaman and steerage passenger, *one dollar and a half* each; all which sums shall be paid by the master, or consignee, of such vessel. And the master of every vessel so arriving, shall, within six hours after his vessel shall be moored, deliver at the health office, a true account of the tonage of his vessel, the place from which she arrived, and the number of seamen and passengers brought in said vessel, and shall pay at the health office, the several sums due, agreeably to these regulations.

And every master, neglecting to make such payment, or to deliver such account, shall forfeit the sum of *one hundred dollars;* and if he delivers a false account, with intent to defraud, shall forfeit the sum of *three hundred dollars.*

By order of the board of health,

J. C. Bronaugh, *Resident physician & president of the board of health.*

Attest.

D. Shannon, *Clerk.*

From the text of the foregoing ordinance it appears that reprints of it were provided, to be handed by pilots to the masters of vessels entering the harbor of Pensacola. No copies of such reprints, which were probably in broadside form, have been yet recorded.

It seems likely that a similar ordinance was passed by the Board of Health of St. Augustine, for the regulation of quarantine at that port. But such an ordinance has not yet been found in any printed form.

950 Michigan Ave.

A. M. A. JOURNAL ANNOUNCES INCIDENCE OF JAUNDICE IN ARMY IS DECREASING

The incidence of jaundice in the army, following vaccination against yellow fever, is decreasing, The Journal of the American Medical Association announces in its August 8 issue. The announcement says:

"As The Journal goes to press it may be announced that the incidence of cases of jaundice following vaccination against yellow fever is decreasing. Since such cases first appeared, investigators of the highest repute in the fields of epidemiology, pathology, infectious diseases and viruses have been intensively engaged in a study of the factors concerned. There is in the minds of those familiar with the situation the firm conviction that the condition concerned certainly *is not yellow fever.* There seems to be no reason to believe that it is yellow fever or any abortive or mild form of that disease. The vaccine concerned gives actual protection against yellow fever. Only a few batches of vaccine seem to have been involved, although obviously many thousands of men were inoculated with material from each batch. The investigators feel that the technic of preparation now in use will be followed shortly by a discontinuance of new cases. It must be remembered, however, that the incubation period may be months in duration. The jaundice concerned has not noticeably affected the civilian population. An official statement in the form of an army medical department circular will be issued in the near future."

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The Journal of The Florida Medical Association

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1943 CONVENTION CITY TO BE CHANGED

The annual convention of the Florida Medical Association, scheduled for St. Petersburg in 1943, will not be held there. A communication dated August 17, 1942, signed by Dr. O. O. Feaster, secretary of the Pinellas County Medical Society, advises that developments of the war render it impossible for the Pinellas County Medical Society to carry on with the plans for entertaining the Florida Medical Association next April. All of the large hotels and many of the smaller ones, as well as apartment houses, are filled or the rooms reserved.

The Board of Governors of the State Association will select another convention city for 1943, and as soon as a decision has been reached, an announcement will be made in your Journal.

MEDICAL FEE SCHEDULE

The Committee on Medical Fee Schedule met at the George Washington Hotel in Jacksonville on August 18, 1942. This committee was directed by Hon. Boyce A. Williams, chairman of the Florida Industrial Commission, in accordance with a resolution adopted at the conference in Tallahassee on June 25, 1942, to hold this meeting. The following report was unanimously adopted, with one member, Mr. Ingle, recorded as not voting:

It is recommended to the Florida Industrial Commission that the present medical fee schedule (a copy of which is attached) for the State of Florida, which is now in effect, in its component counties, subject to the following changes:

1. Delete "Consultations . . . . $15.00," and insert . . . "Consulting Specialist Fee . . . . A. & A."

2. To be inserted immediately below line reading "Minimum Fee Schedule for Medical Treatment and Care of Injured Employees" . . . . "In those counties where normal charges for treatment and services are less than the schedule herewith submitted, the schedule to be adopted in such county shall be such charges as prevail in that community at the present time, which in no case shall exceed the accompanying schedule."

3. After Care: Delete specific periods named and provide that: Fees fixed include all necessary after care, but in no case to exceed a period of twelve months. If it is apparent that a case is going to require more than average care, that additional care shall be subject to "A. & A."

4. Under Amputations: Arthrodesis knee, add "or ankle."

5. Delete all x-ray work and substitute: "x-ray work to be A. & A."

Insert after x-ray:

6. Medical Witness Fees: At Commission Hearings fees for doctors testimony shall be from ten to twenty-five dollars, according to distance traveled and time involved.

7. Nothing in this fee schedule shall preclude an employer or his insurance carrier from contracting with a physician on a lump sum fee to render services on a whole or part time basis to the employees of any factory, plant or project.

With respect to fees for herniotomy, the Committee is unable to reach an agreement. The Doctors recommend the fee be without change at $100.00. The representatives of the self-insurers and insurance companies recommend that it be reduced to $75.00.

Any items which carry a higher fee, (except for herniotomy) than the New York Fee Schedule shall in lieu of the fee have the symbol "A. & A." inserted.

NOTE—"A. & A." means Authorization and Arrangement established by agreement between the physician and the carrier or employer. This designation has been applied when the extreme range of variation and complexity in the individual problem renders a fixed minimum standard impractical.

It was further recommended that there be appointed a joint committee of doctors and insurance carriers to deal with problems which may arise.

In the opening paragraph of this report is shown "(a copy of which is attached)." This refers to the proposed fee schedule, which was recommended by the Board of Governors of the Florida Medical Association and mailed to the secretaries of all county medical societies on June 2, 1938, with the suggestion that each county medical society adopt it immediately. From reports received, it is assumed that every county medical society in Florida has adopted the suggested fee schedule with minor changes made necessary by local conditions. The suggested minimum fee schedule for medical treatment and care of insured employees, proposed in 1938, was

mimeographed and a supply of copies furnished to the secretary of each county medical society. A supply of these mimeographed copies has been kept on hand at the Association's headquarters office and sent on request to secretaries of the county medical societies.

The personnel of the Medical Fee Schedule Committee which met in Jacksonville on August 18, 1942 and reported to the Florida Industrial Commission, is as follows:

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Liberty Mutual Ins. Co., Sidney Crane
Lumbermens Mutual Casualty Co., Frank Scannell
Travelers Ins. Co., Dr. L. G. Ellis

Mr. C. L. Daughtry served as chairman.

WAR PARTICIPATION

The following letter from the chairman of the Florida Committee on Procurement and Assignment to the chairmen of county committees is reproduced here for the benefit of the other members of our Association who may be interested. The second paragraph is deleted as the information contained therein might be of benefit to the enemy.

Dear Doctor:

In the first place, please accept the hearty appreciation of the State Committee on Procurement and Assignment for the cooperation and good work you and your county committee have done. Since your activities are such positive evidence of your interest in the work of the Procurement and Assignment service, we thought you would be desirous of knowing what had been accomplished since May 1 when the Medical Officers Recruiting Board was put into operation, and our work speeded up.

The National Committee set for Florida a quota of . . . .

The Medical Officers Recruiting Board has made up for you the enclosed list giving the status of the various doctors whom you have declared available.

May we request that, after studying the report, you do the following things:

1. Send to the State Committee at 2033 Riverside Avenue, Jacksonville, any suggestions or criticisms which occur to you.

2. Personally contact the men whose commissions are delayed, and inform us of this fact so that we may try to speed up their obtaining these commissions.

3. Contact the men who have not applied for commissions, whom you declared available.

As things now stand and have been going, it will be necessary for practically every physically qualified physician who has been declared available to receive a commission if we are going to fill the quota which has been set for Florida. With this knowledge at hand, we are urging your active and strenuous cooperation in getting commissioned the men in your county, who have been declared available already To obtain officers from this group would probably be fairer than extending your present limits of availability in order to get the men.

With such activities on the part of the various county committees, it is quite evident that the quota for Florida will be obtained in the very near future. Your State Committee is ready to help in every way. Please feel free to call on us.

Regards and kindest good wishes.

Sincerely yours

(Signed) Edward Jelks, M. D., Chairman
Florida Committee on Procurement
and Assignment Service

REPORT OF FLORIDA DELEGATES TO AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

MEREDITH MALLORY, M. D., ORLANDO
EDWARD JELKS, M. D., JACKSONVILLE

To the Members of the Board of Governors:

The 93rd meeting of the American Medical Association, held at Atlantic City between June 8 and 12, 1942, though not having a record enrolment, was attended by approximately 9.000. It had been planned that this meeting should be Pan American in scope. Unfortunately, the happenings since Pearl Harbor prevented representation from many South American countries. Doctors from a number of American Republics and one from the Philippine Islands did attend.

In the House of Delegates the registration was 176. Only 8 alternates were seated. The small percentage of the delegates to be represented by alternates speaks well for the interest throughout the profession in the work of the American Medical Association.

Your delegates had been instructed by the House of Delegates of the Florida Medical Association to support actively any endeavor by the representation from Georgia to aid in obtaining for the University of Georgia School of Medicine proper recognition and classification by the Council on Medical Education and Hospitals. Since the subject was not brought up on the floor of the House of Delegates there was no action for your representation to take.

A resolution was adopted instructing the Board of Trustees to investigate and cooperate with the military services in providing opportunities for doctors at the close of the war to receive refresher training in hospitals and medical schools before they are dismissed from the Service.

A resolution recommending that women physicians be made eligible for obtaining commissions in the Medical Corps of the Army and Navy was not adopted.

The House recorded its approval of the work done by the National Physicians Committee for the extension of medical service.

The House reaffirmed its opinion that conduct of the members of the Association was a matter for local medical societies to control rather than the House of Delegates.

On recommendation of the Reference Committee on Hygiene and Public Health a resolution was adopted condemning the issuing by doctors of certificates of

health to prostitutes signifying that they are free from venereal disease.

The greatest interest and activity of the House was devoted to efforts relative to the war. The Committee on Medical Preparedness at its own request was discharged with expressions of appreciation for the fine work it had done. On the recommendation of this Committee there was formed a War Participation Committee of the American Medical Association. Its duties were not outlined in detail. It will be charged primarily with coordinating the efforts of the doctors toward winning the war and carrying out the pledge of the House of Delegates to the government that the American Medical Association promises energetic cooperation with those who are charged with responsibility of directing the men and materials in the fighting of the war.

The Speaker, Dr. H. H. Shoulders, the President, Dr. Frank Lahey, and the President-Elect, Dr. Fred W. Rankin, discussed, in a manner characteristic to each, three phases of the subject, "The War and the Doctor." The urgent need for physicians in the armed forces was presented.

The strongest presentation of the needs for doctors in the military services was made at the dinner for the House of Delegates and also the following day at one of the sessions of the House by Mr. Paul V. McNutt, Director of Man Power. He stated that although the needs of the Services were not being supplied by the Procurement and Assignment Service, he was very positive that we doctors could so distribute ourselves that there would be an adequate allocation of medical care to the military forces and the civilian population at home. He emphasized that if the needs of doctors for the armed forces were not obtained through the agencies working today, they would be enlisted by some other method. He did not mention the method, but left no doubt in the listener's mind that the needed doctors would be secured. There was no question of his being convinced that he had the authority to secure them.

In his presidential address before the general session Dr. Rankin reviewed the activities of the Medical Preparedness Committee and the Procurement and Assignment Service. He presented the need for doctors in the services and pledged wholehearted support to efforts made to mobilize the doctors for the military forces.

Our sister state of Georgia received the honor of having Dr. J. E. Paullin unanimously elected to the office of president-elect.

One of your delegates served as a member of the Reference Committee Report of Officers. Both of your delegates attended all sessions of the House.

Meredith Mallory
Edward Jelks

STANDARD NOMENCLATURE

A new book on "Standard Nomenclature of Disease and Standard Nomenclature of Operations" has just been published by the American Medical Association. This book represents a complete revision of the original volume published in 1932. The present edition was compiled by a committee appointed by the Board of Trustees of the American Medical Association, which had the cooperation of special committees from the various branches of medicine and surgery.

This book will be useful in the editing of material for medical publications. Hospitals and all persons who are concerned with scientific medicine are urged to adopt the use of this standardized nomenclature.

BIRTHS, MARRIAGES AND DEATHS

BIRTHS

Dr. and Mrs. Edson J. Andrews of Tallahassee announce the birth of a daughter, Mary Page, on May 24.

Dr. and Mrs. W. R. Schnauss of Jacksonville announce the birth of a daughter, Carolyn Frances, on August 12.

Dr. and Mrs. K. K. Waering of Atlantic Beach announce the birth of a son, John K., on August 30.

MARRIAGES

Dr. Hugh A. Carithers, Jr., of Jacksonville and Miss Cornelia Morse of Auburn, N. Y., were married on July 27.

Dr. A. Buist Litterer and Mrs. Carolyn Coffin of Miami were married on September 5.

Dr. F. L. Snyder of Hollywood and Miss Marie Lackey of Golden Beach were married on June 20.

DEATHS

Dr. Robert E. Gilbert of Winter Haven died on August 6.

Dr. Omer F. Allen of Miami died on August 24.

STATE NEWS ITEMS

President Gilbert S. Osincup has appointed a "War Participation Committee" to replace the former Committee on Medical Preparedness. Dr. Edward Jelks of Jacksonville has been named chairman of the new committee. The full personnel of this committee appears in this Journal on the page listing the names of the officers and committeemen.

Dr. W. M. Rowlett of Tampa left the early part of August for a month's stay in New Hampshire. He visited a number of clinics while in the North.

Florida physicians who attended the Southern Pediatric Seminar held in Saluda, N. C., July 20 to August 2, were: Robert C. Black, Plant City; George A. Dame, Fernandina; J. P. Tomlinson, Lake Wales; Cecil H. Wilson, Bartow.

Members of the State Association who wish to read papers at one of the scientific sessions of the annual convention to be held in 1943, are urged to file applications at once with Dr. Herbert E. White, chairman of the Committee on Scientific Work. Dr. White has announced that no general letter calling for applications will be mailed to the entire membership of the Association. All applications should be addressed to Dr. Herbert E. White, Box 1018, Jacksonville.

The Florida doctors attending the meeting of the American Urological Association held in New York City, June 1-4, were: James L. Estes and E. S. Gilmer, Tampa; Robert B. McIver, Jacksonville; Kenneth E. Montgomery, West Palm Beach; Louis M. Orr, Orlando; E. Clay Shaw, Miami; Gideon Timberlake, St. Petersburg.

Dr. Henry L. Tippins of Miami spent the month of July at Columbia, New York Post Graduate Medical School, taking special work in pediatrics.

Dr. J. I. Thorne of Miami announces the removal of his offices from the duPont Building to 1001 Seybold Building.

COMPONENT COUNTY SOCIETIES

DADE

The Dade County Medical Society held its regular meeting at the Jackson Memorial Hospital on the evening of August 4. The following program was presented: "Function of Nonmedical Personnel of Casualty Stations," Chester M. Wright, Director of Nonmedical Personnel, Dade County Defense Council; "Duties of the Medical Personnel of Casualty Stations," Dr. Homer L. Pearson, Medical Director of Division 10; "Duties of Hospital Teams in Relation to Casualty Stations," Dr. C. L. Clay, Chairman of the Hospital Committee of Dade County Defense Council; "Correlation of Activities of Committee on Health and Housing," Dr. H. A. Walker, Chairman of Committee on Health and Housing, Dade County Defense Council.

DeSOTO-HARDEE-HIGHLANDS-CHARLOTTE GLADES

The DeSoto - Hardee - Highlands - Charlotte - Glades County Medical Society has joined the honor roll of 100 per cent paid societies. This society draws its members from nine communities. Officers for 1942 are: Dr. L. W. Martin, Sebring, president; Dr. M. C. Kayton, Wauchula, vice president; and Dr. Gordon H. McSwain, Arcadia, secretary-treasurer.

ABSTRACT DEPARTMENT

Members of the Florida Medical Association who have had articles published in out-of-state medical journals are requested to forward such journals or reprints to Box 1018, Jacksonville, for abstracting in this department.

A RESUME OF FEVER THERAPY IN THE MANAGEMENT OF SYPHILIS, PHILLIPS, KENNETH, MIAMI, J. ARKANSAS M. SOC. 38: 139-144 (DEC.) 1941.

According to this author, a combination of chemotherapy and fever therapy is the most efficient method of treatment when the time element required for clinical improvement is considered. It is disappointing in that it does not reverse the reaction to the Wassermann test, but if quantitative serologic studies are made, the true efficacy of the method is shown. Objections to fever therapy at present are based on economic reasons and the contention that it increases the hazard of therapy.

The technic used by the author in all stages of syphilis consists of treatments of from three to four hours during which the patient's temperature is held between 105.4 and 106 F. by means of high frequency currents. Treatments are given twice weekly until a total of fifty hours has been reached. The arsenical drug used is given at the temperature peak, with a mercurial or bismuth preparation in between if the arsenical is used once a week.

LIPOSARCOMA OF THE STOMACH; REPORT OF A CASE, ABRAMS, MAURICE J., BREWTON, ALA., AND TURBERVILLE, J. S., CENTURY, SOUTH. SURGEON 10: 891-896 (DEC.) 1941.

The authors report a case of liposarcoma of the stomach, noting that in as complete a review of the literature as they have been able to conduct, no report of, or reference to, liposarcoma occurring in the stomach has been found. They call attention to the rarity of liposarcoma anywhere in the gastrointestinal tract and briefly review the pathologic changes produced by lipoma and liposarcoma. They quote Ewing as follows: "Tumors of this type are quite rare, but probably much more common than the reports in the literature would indicate."

The authors present 4 excellent photomicrographs of tissue from a gland removed at laparotomy in their case. A review of the slides by Dr. C. E. Royce of Jacksonville brought the following opinion: "In spite of the rarity of liposarcoma of the stomach, I feel that the con-

dition is just that as shown in the specimen submitted. The tumor cells in their embryonic form or in their more mature form are stained by Sudan III and the gradual transition from a malignant appearing cell to a characteristic adult fat cell can easily be traced."

MAXILLARY ALVEOLAR FISTULA REPAIR, GAMMAGE, F. V., CHATTAHOOCHEE, EYE, EAR, NOSE & THROAT MONTHLY, 8: 246-249 (SEPT.) 1941.

Chronic infection of the antrum as it is related to dental infection is discussed; also the problem of fistula between the antrum and an alveolar process. An interesting case is presented to show the development of antral infection from an alveolar fistula. Drainage of the antral infection was by a classical Caldwell-Luc operation; later the fistula between the antrum and the alveolar process was repaired by surgical means.

RIGHT HOMONYMOUS, HEMIANOPSIA, GAMMAGE, F. V., CHATTAHOOCHEE, EYE, EAR, NOSE & THROAT MONTHLY 20: 137,138,143 (JUNE) 1941.

A case of right homonymous hemianopsia is reported in which the condition was caused by a complete separation of the fibres of the left optic radiation of Gratiolet following the removal of a glioma from the left parieto-occipital area of the cerebrum. The author details the neurologic, otologic and ophthalmologic factors leading to the anatomic localization of this lesion.

BOOKS RECEIVED

Acknowledgment of books received will be made in this column and this will be deemed by us a full compensation to those sending them. A selection will be made for review as expedient.

CARLOS FINLAY AND YELLOW FEVER. By Carlos E. Finlay, M. D., F. A. C. S., Professor of Ophthalmology of the University of Havana. Cloth. Pp. 249, with illustrations. New York: Oxford University Press, 1940.

MANUAL OF CLINICAL CHEMISTRY. By Miriam Reiner, M. Sc., Assistant Chemist to the Mount Sinai Hospital, New York. Cloth. Price, $3.00. Pp. 296, with illustrations. New York: Interscience Publishers, Inc., 1941.

NUTRITIONAL DEFICIENCIES. By John B. Youmans, A. B., M. S., M. D., Associate Professor of Medicine and Director of Postgraduate Instruction, Vanderbilt University Medical School, Nashville, Tenn. Fabrikoid. Price, $5.00. Pp. 385, with 16 illustrations. Philadelphia, Montreal. London: J. B. Lippincott Company, 1941.

FUNCTIONAL PATHOLOGY. By Leopold Lichtwitz, M. D., Chief of the Medical Division of the Montefiore Hospital, Clinical Professor of Medicine, Columbia University, New York. Cloth. Price, $8.75. Pp. 570, with 198 illustrations. New York: Grune and Stratton, Inc., 1941.

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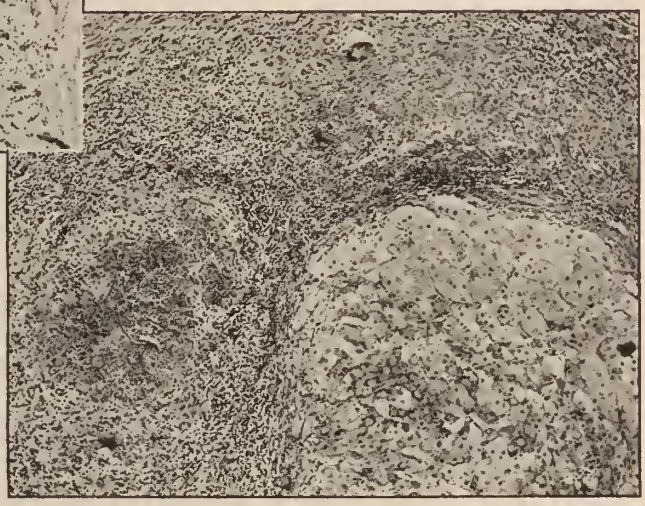
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PREMENSTRUAL DISTRESS

Ammonium chloride has been offered as an effective agent in the treatment of premenstrual distress of tension, the chief symptoms of which are headache, emotional instability, irritability, abdominal distention, nausea, pruritis and swelling of the vulva. It is of little value in the treatment of migraine unrelated to the menstrual cycle, dysmenorrhea or painful breasts.

Electrolyte therapy, as advanced by Greenhill and Freed,[1] is based upon the theory that premenstrual distress and tension is the result of changes in the electrolyte and water balance of the various tissues of the body. Thus, under the influence of certain ovarian steriods, sodium is retained by the tissues with a subsequent rise in extracellular fluid, which results in the specific symptoms involved. Other investigators have attacked the problem by the administration of progesterone, estrone, testosterone proprionate and other hormones, in such a way antagonizing the influence of ovarian steroids. It would appear, however, that there is some doubt as to whether specific steroids give rise to the symptoms of premenstrual distress. Greenhill and Freed,[1] by preventing the retention of sodium, secured gratifying and often spectacular results.

Ammonium chloride has no effect upon ovulation. Karnaky[2] reported that in cases of functional bleeding there was less bleeding while ammonium chloride was being taken. From the viewpoint of acid-alkali balance, the administration of ammonium chloride favors a more ionizable calcium and favors shifting the *p*H of the blood toward the acid side. In fact, the ill feeling of menstruation has been produced experimentally by introducing alkalis into the anterior lip of the cervix.

Greenhill and Freed[1] recommended the daily administration of 3 Gm. of ammonium chloride, divided into 3 doses, for from ten to twelve days before the expected menstrual period. Tablets or syrup of ammonium chloride may be employed.

Other investigators[2] reported equally gratifying results in premenstrual distress by the administration of ammonium chloride.

1. Greenhill, J. P., and Freed, S. C.: Electrolyte Therapy of Premenstrual Distress, J. A. M. A. **117**: 504-506 (Aug. 16) 1941.
2. Karnaky, K. J.; Katz, J., and Tietz, E. B.: In discussion on paper of Greenhill and Freed.[1]



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INFLUENCE OF 'SODIUM AMYTAL' ON INTELLIGENCE

During air raids on London various sedatives were tried on anxious patients, not only therapeutically, but prophylactically to reduce apprehension and induce a state of relative mental calm. In order to determine the degree of mental impairment and the capacity to react reasonably to an emergency, Slater et al (Lancet, 1: 676, June 6, 1942) measured the effect of 'Sodium Amytal' (Sodium Iso-amyl Ethyl Barbiturate, Lilly) by means of standard intelligence tests which were performed on nearly 400 cases. It was concluded that doses of 3 grains or less did not impair the functioning of the patient's intelligence to any important extent. The drug must be prescribed, nevertheless, with individual susceptibilities and requirements in mind. Doses of 1 grain to 3 grains were most generally useful.

ANISEIKONIA

Life Magazine has again demonstrated its interest in eyes and eyesight correction. In its Aug. 3 issue, pages 82/5, appears a picture article on aniseikonia which the Life editorial writer describes as follows:

"Aniseikonia is a difficulty that can afflict only those who have two eyes. When the separate images perceived by the two eyes have the same size and shape, they can be fused into a single binocular image that has depth and sharp definition of its three dimensions. The images perceived by aniseikonic eyes are unequal in size and different in shape. They can be fused only with effort. Severe aniseikonia may cause fatigue headaches, general nervousness, or a tendency to mal de mer and a proneness to auto accidents. The affliction was first identified at the Dartmouth Eye Institute, Hanover, N. H., only ten years ago. Already the discoveries of the Institute's ingenious research methods, shown here, have been translated into devices for accurate diagnosis and into corrective glasses now being worn by upwards of 6,000 persons."

The article is supported by pictures dramatizing what is seen when experimental aniseikonia is induced by placing iseikonic lenses on experimental subjects. American Optical Company and Dartmouth cooperated with the Life photographer at Hanover in producing this exceptionally interesting article.

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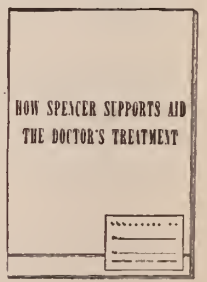
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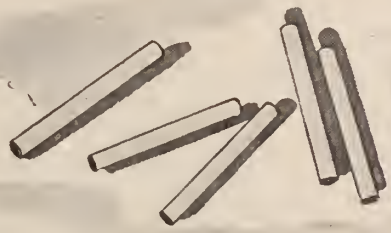
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* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*
Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60

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A MESSAGE FROM THE PRESIDENT

Dear Friends: The vacation we looked forward to has come to a close and we have before us another year, a very hard year. In spite of unrest and uncertainty, you have undoubtedly made plans for the coming season. These plans probably include subscribing to the Bulletin, ordering handbooks, and reading the charges for the year.

The district meetings will not be held this year as scheduled. Upon recommendation of the Council, the Board of Governors approved the cancellation of the four meetings which were to be held in Tallahassee, Ocala, Sarasota and Miami during October. This action became advisable in view of the fact that many physicians are now in military service or planning to enter service, leaving the doctors at home with a double burden. Transportation is another problem which entered into the decision.

The Bulletin, our official magazine, has been called to your attention many times. However, I would like to say again, read it. The anniversary number, dated August 1942, brings you our national president's message to the twentieth annual session in Atlanta. Also in that issue each departmental chairman will find answers to the questions that are bound to arise. With this help and with our charges before us, we need but the will to do. In her message, "Our Challenge in this Crisis," our beloved president said: "As your president, I shall have but one design, a single aim, and that is that we shall be so united, so strong, so forceful, that no smallest opportunity for service shall pass us by." Let us all work together, true to that which we know is right. Let us always carry on a constructive program. As we go about our many duties, war or others, may we always keep in mind that we, as wives of the doctors of this nation, have some very special charges. The greatest of these is to help maintain a high state of morale in this nation during these troubled times.

A helpful question-and-answer pamphlet, "Be Informed," sent out by the national program chairman, Mrs. William Hibbitts, was distributed at the State Convention. If your society does not have a copy, let me know, or write to Mrs. Hibbitts, 2524 Wood St., Texarkana, Texas.

And once again I ask, please note, that you send me a copy of your 1942-43 officers and chairmen.

Lydia Krueger (Mrs. F. W. Krueger)
President.

- - - - *in Miami, Florida*



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STATE AND SECTIONAL MEETINGS

SOCIETY	PRESIDENT	SECRETARY	ANNUAL MEETING
Florida Medical Association	Gilbert S. Osincup, Orlando	Shaler Richardson, Jacksonville	Apr. 12-14, 1943
Florida Medical Districts:			
A—Northwest	Courtland D. Whitaker, Marianna	Stewart Thompson, Jacksonville	Tallahassee, Postponed
B—Northeast	L. Y. Dyrenforth, Jacksonville	" " "	Ocala, Postponed
C—Southwest	Edgar Watson, Lakeland	" " "	Sarasota, Postponed
D—Southeast	William Y. Sayad, W. Palm Beach	" " "	Miami, Postponed
Alabama Medical Association	H. B. Searcy, Tuscaloosa	D. L. Cannon, Montgomery	Birmingham, Apr. 20-22, 1943
Georgia, Medical Assn. of	James A. Redfearn, Albany	E. D. Shanks, Atlanta	Atlanta, May 11-14, 1943
Florida—			
Section, Am. College Phys.	R. H. Knowlton, St. Petersburg	Kenneth Phillips, Miami	Apr. 11-12, 1943
Dental Society, State	I. W. Shields, Miami	W. P. Wood, Jr., Tampa	Tampa, Nov. 9-11, 1942
Derm. and Syph., Soc. of	Wiley M. Sams, Miami	Lauren M. Sompayrac, Jacksonville	Apr. 11-12, 1943
East Coast Medical Association	T. C. Kenaston, Cocoa	I. M. Hay, Melbourne	Melbourne, 1942
Hospital Association	Mr. Ernest G. McKay, Tampa	Mr. R. L. Martin, St. Petersburg	Tampa—Postponed
Industrial Surgeons, Assn. of	Frank D. Gray, Orlando	Richard H. Walker, Orlando	Apr. 11-12, 1943
Medical Postgraduate Course	Turner Z. Cason, Jacksonville	Chairman	
Nurses Association, State	Mrs. M. Stetson, St. Petersburg	Mrs. Phyllis Leonard, St. Augustine	Orlando, November, 1942
Ophthal. & Otol., Soc. of	Shaler Richardson, Jacksonville	C. E. Dunaway, Miami	Apr. 11-12, 1943
Pathological Society	L. Y. Dyrenforth, Jacksonville	Iva C. Youmans, Miami	Apr. 11-12, 1943
Pediatric Society	Ludo von Meysenbug, Daytona B.	Robert Blessing, Ft. Lauderdale	Apr. 11-12, 1943
Pharmaceutical Association, State	Mr. Emmett L. Brown, Palatka	Mr. R. Q. Richards, Ft. Myers	
Public Health Association	W. H. Pickett, Jacksonville	Lloyd N. Harlow, Jacksonville	Miami, Fall, 1942
Radiological Society	John N. Moore, Ocala	Walter A. Weed, Orlando	Apr. 11-12, 1943
Railway Surgeons' Association	Frank D. Gray, Orlando	W. C. Page, Cocoa	Apr. 11-12, 1943
Tuberculosis & Health Assn.	Mr. E. M. Newald, Orlando	Mrs. C. R. Whitaker, Eustis	
Chattahoochee Valley Med. Assn.	Herbert E. White, St. Augustine	Robert B. McIver, Jacksonville	Postponed
Gulf Coast Clinical Society	G. G. Oswalt, Mobile, Ala.	C. L. Rutherford, Mobile, Ala.	Mobile, 1942
S.E. Sec., Am. Cong. Phys. Ther.	John J. McGuire, Pensacola	Kenneth Phillips, Miami	
Southeastern Surgical Congress	Alton Ochsner, New Orleans	B. T. Beasley, Atlanta	Louisville, Mar. 8-10, 1943
Southern Medical Association	M. Pinson Neal, Columbia, Mo.	Mr. C. P. Loranz, Birmingham	Richmond, November 10-12, 19
Suwannee River Medical Society	L. J. Arnold, Jr., Lake City	T. H. Bates, Lake City	Lake City, Dec. 1942

COMPONENT SOCIETIES BY DISTRICTS

	SOCIETY	PRESIDENT	SECRETARY	MEETING DATE	MEMBERS Total	MEMBERS Paid	COUNCILOR
A	Bay	M. F. Parker, M.D. Panama City	J. O. Barfield, M.D. County Health Unit Panama City		10	9	
	Escambia *Santa Rosa*	M. W. Dodson, M.D. 309 Brent Bldg. Pensacola	Alvyn W. White, M.D. 24 W. Chase St. Pensacola	2nd Tuesday 8:00 P.M.	52	51	A-1-43 C. D. Whitaker, M.D. Marianna
	Franklin-Gulf	Thos. Meriwether, M.D. Wewahitchka	J. R. Norton, M.D. Port St. Joe	3rd Tuesday Odd Months	5	4	
	Jackson *Calhoun*	W. R. Wandeck, M.D. Marianna	R. N. Joyner, M.D. Marianna	2nd Tuesday 7:30 P.M.	12	100%	
	Walton-Okaloosa	A. G. Williams, M.D. Lakewood	R. B. Spires, M.D. DeFuniak Springs	3rd Thursday 8:00 P.M.	6	100%	
	Washington-Holmes	N. J. Dawkins, M.D. Vernon	B. W. Dalton, M.D. Vernon		6	100%	
B	Columbia *Baker, Hamilton*	Harry S. Howell, M.D. Blanche Hotel Annex Lake City	Thomas H. Bates, M.D. Blanche Hotel Annex Lake City	1st Monday 7:30 P.M.	11	100%	A-2-44 William D. Rogers, M.D. Chattahoochee
	Leon-Gadsden-Liberty-Wakulla-Jefferson	G. H. Garmany, M.D. Tallahassee	B. A. Wilkinson, M.D. Telephone Bldg. Tallahassee	Quarterly 3:00 P.M.	40	37	
	Madison-Suwannee	Eustace Long, M.D. Madison	E. D. Thorpe, M.D. Madison		8	100%	
	Taylor *Dixie, Lafayette*	J. C. Ellis, M.D. Perry	Chas. A. O'Quinn, M.D. Perry	Last Friday 8:00 P.M.	5	100%	
	Alachua *Bradford, Gilchrist, Union*	R. E. Summitt, M.D. 122 No. Pleasant St. Gainesville	Chester F. Ahmann, M.D. 1043 W. Masonic Gainesville	2nd Wednesday 7:30 P.M.	29	23	
	Duval *Clay, Nassau*	Ernest B. Milam, M.D. 508 Greenleaf Bldg. Jacksonville	T. Z. Cason, M.D., *Acting* 2033 Riverside Ave. Jacksonville	1st Tuesday 8:15 P.M.	192	100%	B-3-43 L. Y. Dyrenforth, M.D. Jacksonville
	Marion *Levy*	B. S. Stutts, M.D. Anderson Bldg. Dunnellon	T. Hartley Davis, M.D. 202 Commercial Bank Ocala	3rd Thursday 12:30 P.M.	29	28	
	Putnam	J. Worth Brantley, M.D. Grandin	C. M. Knight, M.D. Palatka	2nd Tuesday Even Months 7:00 P.M.	10	9	
	St. Johns	W. D. Webb, M.D. 220 St. George St. St. Augustine	Charles C. Grace, M.D. East Coast Hospital St. Augustine	3rd Tuesday 8:30 P.M.	12	100%	
C	Brevard	G. T. von Colditz, M.D. Route 1 Cocoa	I. K. Hicks, M.D. Melbourne	3rd Wednesday	11	100%	B-4-44 Meredith Mallory, M.D. Orlando
	Lake *Sumter*	Louis R. Bowen, M.D. Box 905 Eustis	R. H. Williams, M.D. State Theater Bldg. Eustis	1st Thursday 12:30 P.M.	20	19	
	Orange *Osceola*	Spencer A. Folsom, M.D. 319 Exchange Bldg. Orlando	C. D. Berry, M.D. 314 Exchange Bldg. Orlando	3rd Wednesday 8:30 P.M.	89	83	
	Seminole	C. L. Park, M.D. 515 1st Nat. Bank Bldg. Sanford	O. L. Barks, M.D. Sanford Clinic Sanford	2nd Monday 7:00 P.M.	13	100%	
	Volusia *Flagler*	W. C. Pay, M.D. 221 W. Rich Ave. DeLand	R. L. Miller, M.D. 258½ S. Beach St. Daytona Beach	2nd Tuesday 7:30 P.M.	46	41	
D	Hillsborough	B. W. Lowry, M.D. 1019 Citizens Bldg. Tampa	James S. Grable, M.D. 811 Citizens Bldg. Tampa	1st Tuesday 8:00 P.M.	104	97	C-5-44 Leland F. Carlton, M.D. Tampa
	Manatee	L. W. Blake, M.D. Bradenton	M. M. Harrison, M.D. Professional Bldg. Bradenton	3rd Tuesday 7:00 P.M.	14	100%	
	Pasco-Hernando-Citrus	J. T. Bradshaw, M.D. San Antonio	G. R. Creekmore, M.D. Brooksville	2nd Thursday 7:00 P.M.	13	100%	
	Pinellas	M. A. Nickle, M.D. 503 Coachman Bldg. Clearwater	O. O. Feaster, M.D. 166 Fourth Ave. N. E. St. Petersburg	1st and 3rd Fridays 6:30 P.M.	106	100%	
	Sarasota	A. Lamar Matthews, M.D. Sarasota	Stanley T. Martin, M.D. 361 Main St. Sarasota	2nd Tuesday 8:30 P.M.	19	15	
	DeSoto-Hardee-Highlands-Charlotte-Glades	L. W. Martin, M.D. Sebring	G. H. McSwain, M.D. Arcadia	2nd Tuesday 8:00 P.M.	20	100%	C-6-43 Edgar Watson, M.D. Lakeland
	Lee *Collier, Hendry*	Harvie J. Stipe, M.D. 312 Pythian Bldg. Fort Myers	A. Louis Girardin, M.D. 309 Pythian Bldg. Fort Myers	3rd Tuesday 7:30 P.M.	17	100%	
	Polk	J. R. Boulware, M.D. Box 367 Lakeland	Edgar Watson, M.D. Box 1021 Lakeland	2nd Wednesday 1:00 P.M.	59	55	
	Palm Beach	James R. Sory, M.D. 616 Harvey Bldg. W. Palm Beach	D. W. Martin, M.D. 618 Comeau Bldg. W. Palm Beach	4th Monday 8:00 P.M.	68	67	D-7-43 William Y. Sayad, M.D. West Palm Beach
	St. Lucie-Okeechobee-Indian River-Martin	R. C. Boothe, M.D. Box 408 Ft. Pierce	Adrian M. Sample, M.D. Box 176 Ft. Pierce	3rd Thursday 8:00 P.M.	18	100%	
	Broward	Elbert McLaury, M.D. 210 Hollywood Bk. Bldg. Hollywood	O. C. Brown, M.D. 915 Sweet Bldg. Fort Lauderdale	4th Wednesday 8:00 P.M.	41	100%	D-8-44 Elbert McLaury, M.D. Hollywood
	Dade	Thomas O. Otto, M.D. 704 Huntington Bldg. Miami	Wiley M. Sams, M.D. 305 Ingraham Bldg. Miami	1st Tuesday 8:30 P.M.	343	298	
	Monroe	Harry C. Galey, M.D. 532 Fleming St. Key West	W. R. Warren, M.D. 511 Eaton St. Key West	1st Sunday 9:00 P.M.	5	100%	

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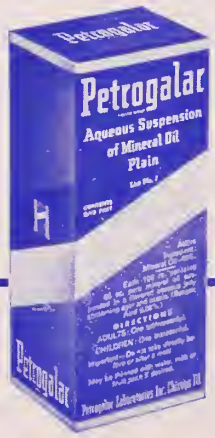


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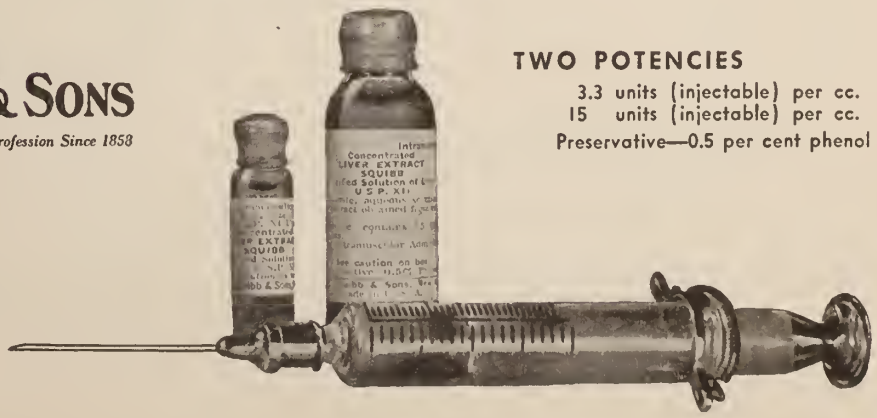
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* N. N. R. 1941, p. 328.

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* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*
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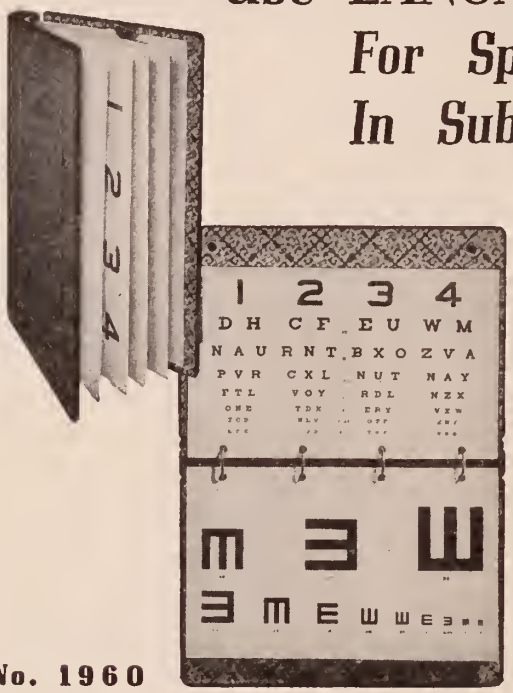
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**The Military Surgeon, Vol. 89, No. 1, p. 5, July, 1941*
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Brückner, H.—Die Biochemie des Tabaks, 1936

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BURNS, VARIOUS TYPES; TREATMENT AND PROGNOSIS FROM THE MILITARY AS WELL AS THE CIVILIAN VIEWPOINT

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A burn from the surgeon's viewpoint may be described as a break in the continuity of tissue due to some external application of or exposure to material objects. These objects may be chemical, thermal or frictional, and may injure by any and every conceivable means of physical contact with the skin and mucous membranes.

The various classifications of burns have been described by many authors and are too numerous to take up in detail. My simple classification is (1) domestic and (2) industrial burns. Domestic burns are commonly caused by disinfecting agents such as cresols, phenols, battery acids, steam from a kettle, actual flame from a stove or gas fire, kerosene, ammonia and gasoline. I should also classify as domestic all of the frictional burns of the so-called "skinned" knees and other parts of the body experienced by children while at play. Most of these domestic burns are not serious in nature and require little if any treatment other than a local application of some sort. The industrial type is the more serious of the two classes of burns. The extent rather than the depth of the burn determines the graveness of the patient's condition.

Pathologically, the familiar classification of Dupuytren[1] presents perhaps the most accurate description of the different degrees of a burn. It is as follows: first degree, simple erythema; second degree, vesication; third degree, destruction of the epidermis and part of the corium; fourth degree, destruction of the entire integument; fifth degree, destruction of the skin and subcutaneous tissue, and encroachment on the muscle; sixth degree, charring or carbonization of the part.

With this classification in mind the treatment of the burn and the burned patient may next be considered. It is noteworthy here that I say treatment of the burned patient and not just the burn itself. If the patient is ignored in the treatment of the burn, I am afraid that the mortality rate following the treatment would be greatly and criminally increased.

The treatment of simple burns or those of first and second degree which are not extensive requires only ordinary palliative and aseptic measures. Most physicians have some preparation or mixture or ointment that they use to take care of these so-called simple burns. In all instances this treatment carried out under aseptic technic causes the patient to have immediate relief from pain and a resulting cure.

Treatment of burns which involve a large amount of the surface of the body, those of the deeper type, and those involving certain parts of the body require the most attentive and exacting care. Before enumerating the most important points in the treatment of this more severe type of burn, again let me emphasize over and over that the patient with the burn must be treated and watched as carefully as the burned parts. Thus, the most important treatment in any case of severe burn would be the treatment of shock. This is taken care of by the usual methods, such as the administration of morphine and the preserving of the temperature of the body approximately within normal limits, which may be done by the use of heaters, tents and blankets, and the warming of the surrounding air. Failing circulation is maintained by elevating the feet and tilting the head downward, and the stimulation of respiration and circulation is effected by the administration of mixtures of carbon dioxide and oxygen and the intravenous administration of such drugs as coramine. It is my belief that the use of adrenalin, camphor and pituitrin is of no demonstrable value. Blood transfusions are definitely of value in certain cases. Preserving the water balance and chloride level by the administration intravenously of saline and glucose, or either of these solutions alone, is a most important factor in preserving the patient's well-being. Nutrition of the patient, elimination both by bowel and bladder and skilled nursing care in preventing mussed-up sheets and creases are essential considerations. Daily inspection of the patient to determine if any

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contraction of burned parts is taking place or stiffening of these parts is beginning, change of position of the patient, and careful inspection of the lungs to determine whether edema is present are a few of the necessary steps in the treatment of the burned patient.

When the patient has been treated, the next step in treating the severely burned is that of taking care of the parts involved. Cleansing surrounding tissues with green soap and water and using no disinfectant on the burned area which may be strong enough to insult tissue that has already been insulted are the first important measures in treating the burn itself. Meticulous care in carrying out debridement of the burned parts under aseptic conditions is essential for preventing infection and encouraging healing. Aseptic procedure in preparing the burned parts is carried out with mild antiseptic solutions such as warm saline irrigations followed by a tannic acid solution and a 5 per cent aqueous spray, which should be sprayed upon all the parts at intervals of from one to two hours until a black protecting scablike surface is formed. A word of caution about the use of tannic acid is perhaps timely, for a solution of this acid should not be used about the smaller joints because of the fact that marked contracture may result with loss of motion and deformity. In selected cases a tannic acid ointment may be used to cover the burned parts.

After the patient is treated for shock and the burned parts are cared for in the manner described, he should be put on sterile sheets in a bed covered by a tent equipped to maintain the body heat at or just above normal with no dressings covering or touching the burned parts. If both the anterior and posterior surfaces of the body are burned, the patient should be turned frequently from side to side so that as little of the burned parts as possible will be subjected to pressure and contact with the bed. Here again I cannot emphasize too much the daily inspection of the patient, of the burned areas and of the intake and output of fluids.

The most important and most common complication experienced by the severely burned patient is that of infection of the burned parts. When this occurs, diligent care is required in the treatment and clearing up of the infection so that the involved areas will function in a manner as nearly normal as possible. The treatment of infections complicating burns does not conform to any set rule. This complication must be treated according to the need of the individual patient.

The next most frequent complications and sequelae that follow the more serious type of burns are those of deformities caused by contractures. These complications must be kept in mind during treatment of a burn. They may best be prevented by constant and early motion of the joints that may be involved, and this early motion is made passive at the instance of the attending surgeon upon his daily inspection of the patient and the affected parts.

One of the more remote and, fortunately, less often observed complications that may occur following a severe burn is that of a duodenal ulcer. I have seen this condition on two occasions in men who were severely burned. In one of these cases the patient was treated symptomatically; following his recovery from the burned condition he was kept on an ulcer regime for a period of six months and he made an uneventful recovery. In the other case an acute abdominal condition developed on the eighth day following the burn. The patient was operated on immediately, and a perforating duodenal ulcer was located in the first part of the duodenum. Fortunately he was operated on within two hours following the perforation and he made an uneventful recovery. Curling's ulcers, when they do occur, generally appear from six to twelve days after a severe burn, usually in the first part of the duodenum. Most of them heal rapidly, but they also may perforate rapidly, and they rarely ever become chronic.

Scar formation, which may impede function of a part or merely be cosmetically distasteful, is frequently another complication of burns. This must be treated according to location and for such reason as the individual surgeon and the patient may agree upon.

In all military organizations and institutions, such as hospitals and dispensaries, wherever a group of surgeons may work, there is usually a set treatment which is made routine in the treatment of burns and the burned patient. Especially is this important in military organizations when a great number of burned patients may have to be treated simultaneously, because of an attack or air raid by enemies. A routine treatment must be followed in this particular instance because great numbers must be cared for in the most intelligent and humane manner. I shall not set down here a routine treatment such as is followed in the hospital in which I am located. I will, however, say that it follows closely the description of the treatment of the more severely burned patient given in this paper. Skin grafts and any

other follow-up surgery required after a burn has healed are always done at the discretion of and in accordance with the judgment of the attending surgeon.

In the present day when war is at hand, surgeons are fortunate in having sulfonamides, which may be combined with oils, tannic acid, or water. I should like here to mention a treatment of burns that is used at Johns Hopkins Hospital[2] after the treatment of shock. It consists of spraying the burned parts by atomizer with a 3 per cent solution of sulfadiazine in 8 per cent triethanolamine every hour during the first day, every two hours during the second day, every three hours during the third day and every four hours during the fourth day. By this time a thin, translucent eschar will have formed, and further spraying will not be necessary. Through this translucent crust the progress of healing can be followed, and in second degree burns the regeneration of the epithelium can be observed. This eschar is sufficiently strong, yet pliable and elastic enough to prevent breaking, so that active exercise and partial weight bearing are encouraged to prevent contracture. After about ten days the edges of the eschar begin to loosen and to separate from the intact epithelium beneath it. In third degree burns the eschar is allowed to remain in place for at least two weeks. The solution of sulfadiazine does not stain, is almost odorless, does not injure skin, mucous membrane or granulating surfaces and can be used in and around the eyes with impunity. Sulfadiazine can be detected in the blood within several hours after it has been sprayed on a burned area, but when the eschar has formed, the blood level rapidly falls even though the spraying is continued. This treatment used at the Johns Hopkins Hospital apparently, from all reports, is simple and efficient. It has not been my good fortune to use this particular combination in the treatment of burns.

CHEMICAL WARFARE[3]

With the development of chemical warfare and the means for launching chemical attacks, it is of great importance that protection in all phases against such means of combat be familiar to all. No portion of the theater of war, whether on land or sea, within a radius of hostile aircraft can be regarded as immune from chemical attack.

In order clearly to understand the measures necessary for protection against chemical attack, a knowledge of the agents and method of projecting them is necessary. A chemical attack, either on land or sea, may be launched in any one of the following ways:

1. From projectiles filled with chemical agents.
2. By releasing a chemical cloud from candles, cylinders, or from special apparatus.
3. From aircraft by either chemical bombs or spray.
4. Small quantities of chemical agents may be filled into hand and rifle grenades.

The several chemical agents are classified as to their (1) physical state at ordinary temperatures, for they may exist as a gas, liquid, or solid; and as to (2) physiologic action on the human organs and tissues. These are: (1) lung irritants, attacking the respiratory tract and lungs; (2) irritant smokes causing sneezing, vomiting and irritation of the nose and throat; (3) lacrimators or tear-producing agents; (4) vesicants causing inflammation and blistering; this type has an insidious onset and attacks the nose, throat and lungs as well as the skin; (5) incendiaries and screening smokes. Burns received from this class are ordinary heat burns, and the chemical may be driven into the skin by projectiles and may keep burning until removed.

Chemical agents may also be classified as to their tactical use, as: (1) casualty agents, (2) harassing agents which only partly reduce the efficiency of the men, (3) screening agents forming smoke and interfering with vision, (4) incendiary agents capable of setting fire to anything. If a chemical agent remains effective over ten minutes it is classed as a persistent; if on the other hand it is only effective for ten minutes or less, it is classified as nonpersistent. Some of the lung irritants are chlorine, phosgene and chlorpicrin (vomiting gas). Of these phosgene is the most commonly used and does not actually burn. The vesicants are mustard gas and lewisite. The skin burns caused by these two are the same. The burns come on slowly and burn very deeply. Wash thoroughly with soap and water after removing all clothing. Gasoline or oil of any type may also be used in an attempt to get rid of these gases from the skin surface. The lacrimators are the tear-producing agents such as chloracetophenone and brombenzylcyanide. These gases do not burn the skin.

INCENDIARY BOMBS

At this time it would be well if everyone could learn how an incendiary bomb looks and works.

The incendiary bomb used most generally by our enemies today is the thermite bomb. This is 14 inches long, about 1½ inches in diameter and weighs 2 2/10 pounds. It is, roughly, shaped similar to a "night stick" carried by policemen. It consists of a magnesium case with mechanism to ignite the thermite upon impact. A very white fire results, burning for about fifteen minutes and generating an enormous heat which is about 4,000 F. Besides the firing of buildings the white fire of these bombs lights up an area and exposes targets, which otherwise would be blacked out. One of the peculiarities of this bomb is that no practical method has been found to extinguish it. While it is burning, no poisonous fumes or gases are given off, even in a confined space. Explosion may take place, but only within two and a half minutes after ignition. Such explosions are dangerous in that the flying particles of flaming metal will burn quickly and painfully. A misty spray of water will cause the bomb to burn itself out quickly. But under no circumstances should a heavy spray or a full stream of water be thrown upon the bomb, as it will only hasten its explosion. Likewise a pyrene fire extinguisher should not be used on the bomb, as it is inflammable and will cause a bomb to explode. Sand or mud may be thrown over the bomb for either will dull its light. Stop at *eight feet* from one of these bombs; wear dark glasses, boots and asbestos gloves, if possible, before trying to handle these bombs. Then catch them up on a long-handled shovel and have a hole dug in mud or dry sand ready to receive the bomb for burial.

In a recent air attack on our forces, the following observations were made by the hospital staff located in the particular area affected and treating the wounded in that particular raid: (1) There were some 350 patients with body burns. (2) All the burns were flash burns. This description, I am led to believe, means that the burns were of the first and second degree types. Of all these patients burned, it was particularly noted that the body surface covered by clothing was not burned. Those wearing undershirts had no burns on the chest or abdomen. Those wearing undershirts and shorts had only face, arm and leg burns. Those fully clothed only suffered face and hand burns. Of all these 350 patients practically none suffered from third degree burns.

I believe all of this group can derive knowledge from these observations that will stand us in good stead, whether it be in teaching first aid to civilians or lecturing to students, nurses or combat troops. Our listeners should be told to remember always when there is danger of burns from ammunition and chemicals to remain fully clothed as nearly as possible at all times during exposure. That precaution will certainly cut down the incidence of extensive burns and the degree of the burns. Of those who died from extensive burns during this particular air attack, it was noted that they had little or no clothing on at the time of exposure and that the burns were of the most severe type. Sometimes a simple observation based on actual facts may save many lives, if only one is wise enough to take away such advice and put it into practice.

It was observed during this air raid that the treatment of burns was not difficult at any time. Large tubs of tannic acid, as well as tubs filled with mineral oil and the sulfonamide drugs, were kept at hand with many large dressings which could be dipped into either of these tubs and applied to the burned areas. In some instances tannic acid jelly was spread on the burned areas by hand. Morphine was given routinely from "syrettes." These "syrettes" are vials containing a morphine solution which is stabile, and they contain a rubber cap with the needle attached and enclosed in the sterile vial.

CONCLUSION

1. Always use a simple classification of burns.
2. Before attempting to treat any burned area consider how the burn was obtained, with what material the burn was caused, and the extent of the burned area.
3. Always treat the patient for shock when necessary.
4. Bear in mind always that the first duty is to treat the burned patient and the next duty is to treat the burned area.
5. Have at hand a well mapped out plan of treatment for burns and the burned patient, and have the necessary equipment to execute these plans.
6. Examine the burned patient and the burned areas daily, and prevent complications and sequelae.
7. Remember the value of the sulfonamide group of drugs.

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Naval Hospital.

ENDOCRINOLOGY AND METABOLISM

EXCERPTS FROM CURRENT STUDIES IN ENDOCRINOLOGY AND METABOLISM

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Endocrinology is being recognized today as the basic science of medicine. To attempt to cover even a portion of the work being done regarding hormones would be an impossible task. I shall simply try to describe some of the more outstanding and recent advances in the application of the newer knowledge concerning hormones and the metabolism of the body.

The pituitary gland, or hypophysis, has often been referred to as the master gland. The various hormones, some of which have been actually isolated and determined by biologic assay, include:

1. A growth hormone, which stimulates epiphyseal growth, as well as builds protein and increases the retention of nitrogen.

2. A thyrotropic hormone, which acts on the thyroid and increases the output of thyroxine. (The thyroid has some function without the pituitary.)

3. A corticotropic hormone, which acts on the adrenal cortex.

4. A prolactin hormone, which acts to stimulate lactation.

5. A glycotropic hormone, which has to do with the metabolism of glycogen.

6. A luteinizing hormone (or L. H.), which has to do with the production of progesterone in the female and androgen in the male.

7. A follicle-stimulating hormone (or F. S. H.), which has to do with the production of estrogen in the female and spermatozoa in the male.

8. A pancreatropic hormone, which produces enlargement of the islands of Langerhans.

It is thus apparent that pituitary disease may produce complex clinical pictures ranging from bone disease with extremes of dwarfism and gigantism, to specific glandular dysfunction and metabolic syndromes, such as diabetes insipidus and Addison's disease. No attempt is made to discuss the individual so-called pituitary diseases except to say that they have been classified into nine groups.

Occasionally, after a pregnancy, particularly one which has involved long, hard labor and shock, a retrogression of the pituitary gland occurs, which may progress to necrosis. In such cases the patient becomes weak and thin, and changes greatly. Emotional instability, loss of libido, subnormal temperature and loss of axillary and pubic hair occur. Suggested treatment in cases of this type includes the administration of thyroid substance, desoxycorticosterone (adrenal cortex extract) and testosterone. A particularly spectacular effect is produced by testosterone.

It is recommended that no extracts of the anterior lobe of the pituitary body be given in the treatment of any case at any time. In some of the larger clinics these extracts are not allowed to be kept in stock. The principle involved is that all active extracts contain proteins which, by the formation of antibodies, destroy the particular hormones they are meant to fortify; it has been demonstrated that they have a destructive effect on the gland itself. The injection of these extracts may produce temporary symptomatic improvement, but due to the production of antibodies, the pituitary gland itself may be greatly affected with a resulting intensification of decreased pituitary function.

The term pituitary obesity is not in good usage and obesity is no longer considered a symptom of pituitary disease. Persons with this disease do not get fat, and authorities state that few cases of Fröhlich's syndrome actually exist.

Appropriate cases of thyrotoxicosis are now being treated with thyroid substance. This therapy is being carried out in the malignant exophthalmic form of this disease, which does not respond to the usual treatment with iodides. Roentgen therapy in preference to surgery is again being recommended in specific cases. In the preoperative preparation of the patient with thyrotoxic disease, it has been thought that the time of preparation was limited once the patient started to take an iodide. At present, iodides are administered over an indefinite length of time as long as an adequate amount of vitamin B_1 is included in the patient's diet. This procedure enables the surgeon to prolong the preoperative building-up process to a maximum without fear of the iodide therapy losing its effect.

Nonspecific uses of thyroid substance include its employment (1) as an adjunct in reducing therapy, (2) as a growth factor, (3) as a nonspecific stimulus for gonadal hypofunction, (4)

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as stimulation in peripheral diseases such as Raynaud's disease, and in diseases of the skin, (5) in tetany, to control attacks, (6) in alopecia, (7) in low metabolism without myxedema, (8) in myasthenia gravis and (9) in diabetes with thyrotoxicosis.

In juvenile myxedema the basal metabolism is not considered of much significance. Thyroid substance should be used with care in the treatment of this condition because it is a growth hormone and in large doses may cause a cessation of growth by stimulating closure of the epiphysis.

In the recognition of cretinism, every infant with an umbilical hernia is considered a possible cretin by some endocrinologists. Cretins have umbilical hernia, but very few babies with umbilical hernia are cretins.

For the ovarian hormones, estrone and progesterone, newer and specific uses are being found. One striking application is the use of these hormones in performing dilatation of the cervix and curettage of the uterus. Owing to the use of estrogen and progesterone in certain cases of metropathia haemorrhagica, repeated dilatation and curettage, which were formerly considered necessary, are no longer required.

The treatment of amenorrhea and dysmenorrhea has been placed on a physiologic basis by the newer knowledge of the effect of these hormones. Long cycles and short cycles may be modified. The so-called safe period has been found to have a definite physiologic basis and is being recommended in normal cases with regular cycles. The treatment of the menopause by means of hormone therapy has become universally accepted. According to one authority, the rationale of treatment should be carried out on the basis of whether the patients are multimillionaires, millionaires, or common people. The treatment of the multimillionaire would include the use of estrogen and progesterone in such a manner as to continue the periods indefinitely and apparently thereby enabling them to remain at a definite continuous physiologic age. The treatment of the millionaire would include the use of estrogens only, enabling the patient to be symptom-free and to taper off in her periods. The treatment of the common person would consist of the taking of luminal three times a day after meals.

In the treatment of the artificial menopause, particularly in young people, if possible both estrogen and progesterone should be used in order to simulate as closely as practicable the normal physiologic cycle. It is recommended that moderately severe cases of menopausal disorder be treated with estrogen alone as a tapering off process. In mild cases sedatives only are required.

The estrogens are also used in the treatment of other conditions. Osteoporosis is a condition which is frequently observed, but not always recognized, the reason being that bone may be 40 per cent deficient in calcium before roentgen examination reveals the deficiency. Osteoporosis occurs in (1) persons experiencing the atrophy of disuse, as, for example, in cases of fracture, (2) the very old and (3) women after the menopause.

A decrease in retention of calcium occurs after the menopause, which results in osteoporosis chiefly of the spine and pelvis. It is thought to be due to a lack of osteogenic cells which produce bone. Since estrogen therapy stimulates mitosis or cell formation and also produces an increased retention of calcium, estrogenic therapy is recommended in cases of this type. In these cases immobilization should not be continued in such a manner that the patient must remain in bed for more than five or six weeks.

In explanation of the foregoing statements the metabolism of bone is briefly mentioned. Bone is constantly changing; the building and reabsorption of bone constantly go on. The stimulus of bone formation is a matter of stress and strain. If a bone is not used, atrophy immediately sets in, because of the loss of calcium from the bone. The calcium is eliminated from the body through the kidneys. For example, if a young person is completely immobilized, it can be demonstrated that calcium immediately begins to leave the bones as shown by blood and urinary examinations. This process also takes place in the adult who, during a period of vacation, builds bone by outdoor activity and upon return to an occupation of a sedentary type, begins to feel indisposed and complains of backache along with other symptoms. Routine urinalysis reveals red blood cells as evidence of renal irritation.

The explanation lies in the fact that calcium is rapidly leaving bones which are not in use and is passing through the kidneys setting up irritation and in some cases actually forming renal calculi. It is obvious that in cases of this type a diet high in calcium, which includes milk, cauliflower or cheese, would act as a detriment to the patient almost simulating poisoning by bichloride

of mercury, because of interference with renal function.

Some excerpts from recent studies in endocrinology and metabolism follow:

Suggested treatment for old age: (a) Conserve and build protein by the use of testosterone. (b) Increase the formation of osteoblasts by the use of estrogen, which also includes the effect of testosterone.

Therapy by means of the implantation of pellets beneath the skin is being used in various deficiency diseases and has even been tried with insulin in the treatment of the diabetic patient. In this form of treatment, the patient is enabled to absorb a continuous dosage from the imbedded pellet and is thereby freed of the necessity of frequent daily injections to control the deficiency. Reimplantation is often unnecessary for a period of ten or twelve months.

Concerning vitamins: If fat is found in the stools, a deficiency of the fat soluble vitamins may be present. They include vitamins A, D, K, and E.

Prolonged use of large doses of vitamin D may lead to bone absorption.

The present treatment of obesity is 90 per cent diet. Adjuncts include vitamins and the use of thyroid substance and benzedrine in suitable cases.

The exact time of the onset of labor has been found to coincide with the disappearance of estrogen and progesterone from the blood.

Recommended treatment in cases of threatened abortion and premature birth includes adequate therapy with estrogen and progesterone.

CONCLUSION

Endocrine therapy should not be employed indiscriminately nor as a shotgun prescription. Research has proved that cancer in mice of a cancerous strain can be rapidly stimulated by the use of estrogen. It is known that estrogenic substances stimulate and progesterone inhibits mitosis or cell formation. On the basis of present knowledge it is recommended that no patient be given estrogens without a complete examination and especially when cervical erosions or tumor-like masses are found in the body, and specifically in the breast. Extremely large doses of estrogen should never be given. Estrogenic therapy over a long period of time should be interrupted with frequent periods of rest.

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THE MANAGEMENT OF DUODENAL ULCER

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Since the time of Hippocrates the medical profession has been faced with the problem of the patient suffering from ulcer. It has been well said that "we live for our stomachs," and no truer adage has been more adequately expressed.

Peptic ulcer was first described by Cruveilhier about a century ago. During the last ten years the whole attitude toward duodenal ulcer has undergone a radical change. Formerly, the diagnosis and treatment of duodenal or peptic ulcer directed attention chiefly to the local lesion and largely ignored the constitutional factors which are now known to be of fundamental importance. At present ulcers are believed to be due to a combination of factors acting in a susceptible person.

The two opposing conceptions of the etiology of ulcer have contended for first place for many decades. They are, first, the view suggested by Rokitansky[1] in 1841 that some central factor is the cause of all ulcers, and second, the view upheld by Virchow in 1853 that local factors are sufficient to explain the pathogenesis of ulcer. Undoubtedly both the central and the local factors are important, but the accumulating evidence probably suggests that central factors, as neurogenic stimuli from the cortex in a vagotonic type of person, are predisposing causes of peptic ulceration. The significant local factors may be enumerated as trauma, erosion caused by acid chyme, and bacterial invasion. It is only natural to presume that foci of infection should be considered as a predisposing cause of the duodenal ulcer. I shall not argue the various theories that have been propounded. Suffice it to say that there is some background for all the theories mentioned.

Cases of peptic ulcer demand early and adequate management, and each case requires individual attention. Dr. Frank Lahey of Boston has consistently reminded the medical profession that peptic ulcer is a curable disease medically and that operation should be advised only when adequate medical treatment fails to keep the lesion under control, or when surgical complications develop. The reiteration of this fact by a

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surgeon as great as Dr. Lahey has resulted in such improvement in the medical treatment of this disease that a much smaller percentage of patients is treated surgically than was treated in this manner a few years ago. The present status of peptic ulcer is that it is a disease which, when recognized early, lends itself to cure, or at least to control when adequate medical treatment is instituted and maintained.

The diagnosis is usually made without a great deal of difficulty. Probably the most important single item in the making of a diagnosis is a carefully taken history. Then to substantiate the history, gastric analysis, roentgen studies and gastroscopic examination are valuable adjuncts.

Briefly the medical management is as follows:

1. The patient is put to bed for twenty-one days, preferably in the hospital where adequate supervision can be maintained. This particular period of treatment is especially important.

2. Diet. The usual Sippy routine is probably the diet of choice. During this early period no other diet that I know of meets the requirements as does the Sippy treatment.

3. Medication. Aluminum hydroxide is probably the drug at this time that has produced the most gratifying results. It can be given by mouth, usually in 2 drachm doses every two or three hours. In the hospitalized case, however, the continuous drip method by means of a tube left in the stomach is satisfactory. Gastric acidity is tested at varying intervals day and night to determine neutralization.

4. The patient is not permitted to smoke.

5. No alcoholic beverage is allowed.

After thorough medication and supervision usually extending over a period of about six weeks, the patient's general condition is carefully considered. He is questioned closely as to pain and what symptoms, if any, remain. Roentgen examination is repeated. After evaluating the information obtained, a sane conclusion can now be arrived at as to whether medical treatment has given sufficient relief to warrant expectation of recovery, or whether surgical intervention will be necessary. It is the consensus[2] that surgical treatment of an uncomplicated peptic ulcer is indicated only after intractability to, or impracticability of medical management has been established.

The indications for surgery may briefly be outlined as follows:

1. Acute perforation
2. Intractable ulcer
3. Pyloric obstruction due to cicatrization
4. Repeated gross hemorrhage
5. Possibility of a malignant condition

Acute perforation occurs in the patient with ulcer, perhaps I should say with chronic ulcer, not infrequently. This is a surgical emergency as the physician all too well knows. The patient is usually a young person; probably the greatest incidence occurs between 21 and 30 years of age. The condition begins suddenly as an acute agonizing knifelike abdominal pain. The patient usually shows some evidence of shock. Upon inspection one notes the characteristic posture, the patient lying in bed upon his back very quiet and resisting any attempt to be moved. There is rarely nausea or vomiting, and the abdomen has the characteristic boardlike rigidity. Air under the diaphragm as demonstrated by roentgen examination is pathognomonic of a ruptured viscus.

In cases of this type every hour's delay of surgery greatly increases the mortality; in every case an operation should be performed immediately. I will not go into the technic of the operative procedure except to say that the simpler the surgery the better the end result. Simple suturing of the perforation and, if possible, covering the wound with gastroepiploic omentum is the most desirable procedure. Lately sulfanilamide powder has been left within the abdomen, which is then closed with two Penrose drains in place.

The patient with an intractable ulcer is certainly a subject for surgery as medical treatment has failed to give relief. The condition has become chronic, and there has developed old scar tissue, which results in more or less constant pain and dyspepsia. Here a subtotal gastric resection is probably the procedure of choice.

Pyloric obstruction, like the intractable ulcer, requires surgical intervention. In fact, surgery is imperative; otherwise, starvation and death result. Here again subtotal gastric resection is probably the procedure of choice. Of course each case presents its individual problem, and occasionally when the patient's general condition is not good, a gastroenterostomy, or some other anastomosing type of procedure would probably be more appropriate.

The higher percentage of mortality following subtotal gastric resection must be considered. At the Mayo Clinic, where it was my good fortune to visit for six weeks, I was particularly inter-

ested in noting that almost invariably in cases of intractable ulcer and pyloric obstruction due to ulcer, a subtotal gastric resection was performed. Only occasionally was gastroenterostomy resorted to, and then only in the aged, the poor surgical risks and the debilitated type of patient. It was interesting to observe in the general run of cases that not infrequently it was necessary to tear down the results of earlier gastroenterostomy and resort to subtotal gastric resection.

The problem of the treatment of a bleeding ulcer is at present far from simple. Some of the conditions of the abdomen that constitute the most serious medical and surgical emergencies are those associated with the bleeding peptic ulcer. Hemorrhage is one of the major complications of peptic ulcer, and peptic ulcer is by far the most common cause of intestinal bleeding. A tabulation of 1,076 cases of this disease, as recorded by Dwyer, Blackford, Cole and Williams,[3] showed that in 208 or 19 per cent of the cases, hemorrhage occurred.

In the consideration of therapeutic procedures one must remember Mean's statement: "Hemorrhage occurs under a variety of circumstances having different therapeutic significance. There are large exsanguinating hemorrhages; there are small ones carrying little risks; there are first hemorrhages and recurring hemorrhages. There are hemorrhages in young persons and in old." His words outline the problem involved in the treatment of the bleeding ulcer. Every patient presents a special case.

Dr. Lahey divided these hemorrhages into two types in regard to treatment; the first type and the more frequent occurs in those cases characterized by the vomiting of large quantities of blood, or the passing of blood in the stool, which may be repeated within twenty-four hours, but which ceases under conservative management, the patient going on to an uneventful recovery. The second type of massive hemorrhage occurs in patients who have repeated recurrent hemorrhages (more than two) in whom a satisfactory blood pressure cannot be maintained by a continuous blood drip and in whom the hemorrhage continues in spite of all conservative measures.

There is remarkable contrast between the incidence of age in relation to massive hemorrhage as compared with the first hemorrhage from peptic ulcer. Massive hemorrhage occurs with equal frequency in patients below and above the age of 45, yet vital statistics show that nearly all fatalities occur in the older group.

It is interesting to note the relation between the hemoglobin reading and the gastric acidity determination following hemorrhage.[4] In any hemorrhage except duodenal, the hemoglobin and gastric acidity correspondingly drop whereas, when there is bleeding from a duodenal ulcer, the hemoglobin drops while the gastric acidity remains at an abnormally high level. This is an important criterion, especially when roentgen examination fails to demonstrate an ulcer, or when the history is vague.

As stated, the patient under 45 years of age usually responds to conservative treatment. The hemorrhage rarely recurs, and, according to Dr. Lahey, the patient should be treated medically. The medical management at the time of the hemorrhage consists in sedation, absolute rest, infusions and blood transfusions. Meulengracht, however, suggested feeding the patient. He believed that the hydrochloric acid of the stomach would digest the fibrin, thus producing a second hemorrhage, much more readily than food would cause the fibrin to be dislodged mechanically. The mortality in his cases after feeding was lower than that in the cases of those who advocated starvation. Certainly this method deserves a trial. It may be that there is need for a rightabout face in the management of cases of bleeding ulcer.

The question as to the optimum time for surgery in these cases is a vague subject. One should certainly always remember that the person above 45 years of age is much more prone to recurrent, severe, exsanguinating hemorrhage.

It is obvious that the time element, namely the time interval between the onset of hemorrhage and operation, is one of the principal factors which influence mortality. If after the second hemorrhage there is evidence of bleeding, of if the patient fails to improve, he should rapidly be put in the best possible condition, mainly by repeated blood transfusions, and immediately referred to surgery. Dr. Richard B. Cattell of the Lahey Clinic in a personal communication stated that he operates upon patients with peptic ulcer when they have had more than one massive hemorrhage. He also stated that the optimum time for surgery is in the interval, if possible, between the attacks of bleeding.

I will not discuss the technic of the surgery except to say that here again, particularly in

cases of acute bleeding, the simpler the surgery the better. Of course in the case in which operation is possible between periods of bleeding, a subtotal gastric resection is probably indicated.

In some instances the question of malignant disease arises. Immediate surgery should always be resorted to in such cases.

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TREATMENT OF BACILLUS PYOCYANEUS INFECTION OF THE CORNEA WITH SULFONAMIDES

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ST. PETERSBURG

The primary purpose of this paper is to present a case in which neoprontosil was used in the treatment of infection of the cornea by Bacillus pyocyaneus. Fortunately, infection of the eye owing to this organism is not common, as it has long been known to be probably the most destructive of all the organisms which attack the cornea, even more so than gonococcus.

As described by Duke-Elder,[1] this species is a gram negative slender rod, armed with a terminal cilium and called the bacillus of blue pus. It is ordinarily slightly pathogenic and is observed frequently in the normal skin. In certain conditions it assumes a character of extreme virulence and forms one of the rarities of ocular pathology, producing a membranous or purulent keratoconjunctivitis usually resulting in perforation and loss of the eye. Except in rare instances, all previously recognized treatment of this infection of the cornea has been of little avail.

REPORT OF CASE

R. A., a boy aged 12, was brought to my office on Aug. 8, 1940, after having been pricked in the eye by a sandspur on the previous day. The eye had become extremely inflamed and painful. Examination revealed ulceration of a small central area of the cornea, which was covered by a bluish membrane. Because of the violence of the general inflammation, the patient was hospitalized on the following day and the usual therapy of atropine, zinc sulfate, hot applications, irrigations and lactogen administered intramuscularly, was instituted.

A smear was taken on September 11. Unidentified gram negative bacilli were reported, and a culture was prepared. After forty-eight hours the Bacillus pyocyaneus was identified.

As the depth of the ulcer and membrane was increasing and cellular elements were forming in the aqueous, on September 17 5 grains of neoprontosil was given every four hours to see if any benefit could be obtained. Improvement was noted on the following day. It continued, and the boy was discharged from the hospital six days later with little inflammation remaining.

After a period of a few weeks all inflammation had disappeared leaving only a thin scar covering the pupillary area. The patient was last examined on Feb. 1, 1942, at which time he could see large objects and had some useful vision.

I believe that in this case neoprontosil must have been of definite value.

The mode of infection is particularly interesting in view of the fact that there are many sandspurs in this locality. This is the only case that I have observed in which an eye was injured in such a manner. It should be kept in mind that the sandspur may often carry the Bacillus pyocyaneus and that deep penetration from its spurs may easily occur.

According to the literature infection caused by this bacillus has usually followed the removal of foreign bodies from the cornea. It is advised that cultures be taken early in suspected cases in order to avoid loss of valuable time as it requires at least about forty-eight hours to obtain a report.

In the recent literature Lepard[2] reported 3 cases of infection of the cornea by the Bacillus pyocyaneus. In 2 of the cases treated in the usual manner enucleation became necessary. Sulfapyridine was used in the treatment of the third case, and the patient recovered.

In the discussion of this report it was brought out that according to Sheie and Souders,[2] the diffusion of sulfathiazole in the aqueous of the eye is only 18 per cent and that of sulfapyridine 81 per cent. It was stated, however, that sulfanilamide also has a high rate of diffusion. In view of this report sulfapyridine would be the drug of choice in such an infection.

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Read before the Pinellas County Medical Society, February 6, 1942.

Power and Light Bldg.

ABNORMAL ELECTROCARDIOGRAMS

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CORAL GABLES
AND
MAJOR KENNETH A. BREWER, M.C.
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Much has been read into electrocardiograms that rightfully does not exist. The chief factor in the proper interpretation of electrocardiograms is not the characteristics of the tracing but the consideration of the patient. This fact is all too frequently obscured by the enthusiasm of the overzealous physician or technician.

A review of some recent works on electrocardiography[1, 2, 3, 4, 5] reveals that certain findings are considered pathognomonic of one form or another of cardiac disease. An upward deflection in the chest lead of less than 0.2 millivolt and great inversion of the T wave in the same lead are two such aberrant findings.

REPORT OF CASES*

Case 1. A 26 year old white soldier was admitted to the Station Hospital, Camp Shelby, Miss., on Aug. 4, 1941, complaining of weakness extending from the hips down, occasional vertigo and indigestion. For fifteen years he had experienced gastric discomfort following the ingestion of all foods, and his appetite was poor, he related.

An appendectomy had been performed eight years prior to admission, and he had had an attack of pleurisy on the left side one year before. He had suffered from an acute attack of arthritis in May, 1941, while in the service, but being on furlough at the time, he was not hospitalized.

Examination at the time of admission revealed a pigeon breast, and coarse rales were heard over the left side of the chest. The blood pressure was 116 systolic and 76 diastolic. Except for accentuation of apical sounds examination of the heart gave negative results.

The blood count, sedimentation rate and blood sugar determination were all within normal limits, and the results of urinalysis and the Kahn test were negative. Also, roentgen examination of the lungs, both knees, hips, lumbar spine, heart (fig. 1A) and gastrointestinal tract gave normal results.

Electrocardiographic examination gave evidence of no abnormalities except that lead 4 F showed an R wave that varied from 0 to 0.12 millivolt. A second electrocardiogram presented like evidence of this variation (fig. 2).

On the night of August 5 the patient was seen by a neuropsychiatrist as he was lying in bed, apparently in severe pain, clutching with his right hand over the cardiac region. He had taken a few steps toward the bathroom and had suddenly fallen to the floor. The attack subsided after two or three minutes, but when asked how he felt, he went into another attack of shorter duration. One fourth of a grain of morphine was administered. The pulse was full and regular at all times, and the face was flushed. "Angina pectoris? Hysteria? Most likely the latter," was the note made on the chart. The following day the blood pressure was 104 systolic and 76 diastolic. He complained of pain in the chest, which he now stated was a concomitant of the indigestion.

On August 8 the patient was transferred to the cardiovascular service for further investigation of the electrocardiographic evidence, which was suggestive of an old anterior myocardial infarction. Additional history at this time revealed that at the age of twelve, while scuffling, the patient had had the first attack of precordial pain, which threw him to the ground. Since then, he had had frequent attacks, with two or three severe ones annually. Various physicians had diagnosed this condi-

*From the cardiovascular renal service of Station Hospital, Camp Shelby, Miss. (United States Army).



Fig. 1A—Roentgenogram of the Heart, Case 1.



Fig. 1B.—Roentgenogram of the Heart, Case 2.

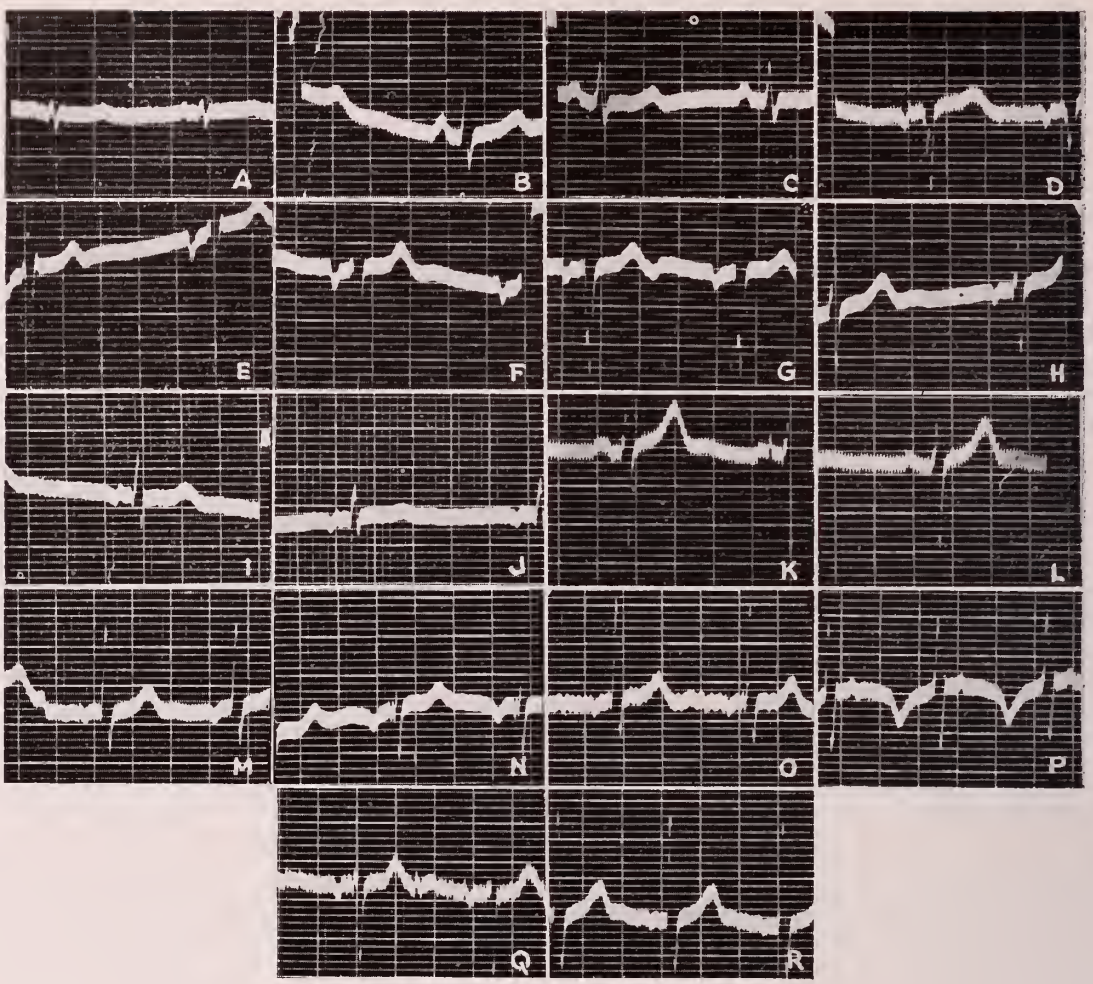


Fig. 2.—Electrocardiograms of Case 1. A, B, C and D are standard leads; E, F, G, H, I and J are leads CF 1 to 6; K is lead 4 R; L is lead 4 L; M is lead 4 F with patient supine and the exploring electrode in the sixth intercostal space; N is the same as M, but with the exploring electrode in the fifth intercostal space; O is lead 4 F with the patient sitting and the exploring electrode in the sixth intercostal space; P is the same as O with the patient standing; Q is the same with the patient standing in deep inspiration; R is the same with the patient standing in deep expiration.

tion as indigestion, and the attacks kept the patient in bed from one to five weeks. During these attacks there was slight response to treatment with sodium bicarbonate. Severe attacks were accompanied by unconsciousness, associated with clonic convulsions. No aura preceded the attacks, and there was no involuntary urination nor defecation. The tongue was bitten on one occasion. Since 1936, when the patient was given spinal anesthesia for an appendectomy, he had been troubled with nocturnal enuresis.

One attack in 1938 or 1939, which occurred in a large city, was so severe that the police pulmotor squad was required to work over the patient for more than an hour. Following this episode, the patient had remained in bed at home for two or three weeks.

All attacks began with epigastric pain, which increased in severity and then radiated to the heart. At times the pain was so severe that the patient became extremely weak and finally lost consciousness. If he received a "shot," he became drowsy, and the pain gradually eased. No more than two injections had ever been required during a single attack.

Examination at this time revealed no scars on the tongue. There was a soft mitral systolic murmur, inconstant and not transmitted. The pulse rate was 70. The conclusion was that this was a case of hysteria. Epilepsy was considered. There was no evidence of any organic disease.

Because of the conviction that there was no organic pathologic condition present, the patient was studied further electrocardiographically. The various common chest leads, CF 1 to 6, were taken as well as leads 4 R and 4 L (fig. 2). In all of these the abnormality persisted. It was then realized that the asthenic habitus of the patient might play a role in the decreased R wave. Lead 4 F was therefore repeated. With the exploring electrode placed in the fifth interspace over the outer border of the palpable apex beat, the R wave was absent or low. The moment, however, that the electrode was moved down to the sixth interspace, the R wave rose from 0.2 millivolt to 1.0 millivolt. This variation confirmed the premise of the influence of habitus on the tracing. To substantiate it further, with the electrode in the sixth interspace the patient inspired deeply, so that the heart assumed a lower position in the chest and a lower position relative to the exploring electrode; the R wave then dropped to its former level of 0.2 millivolt. On expiration, it rose again to 1.2 millivolts.

A diagnosis of hysteria manifested by angina-like episodes, indigestion and epileptiform seizures was made. The patient was returned to duty on August 14.

Case 2. A 26 year old unmarried white soldier was admitted to the Station Hospital Aug. 14, 1941, complaining of precordial pain, dizziness and syncope. The family history was of no significance except that one uncle had died of cardiac disease. The patient had had

measles, mumps, chickenpox, frequent colds and sinusitis, and had been subjected to a tonsillectomy, a mastoidectomy and a submucous resection.

In 1936 a doubtful Kline test gave negative results when repeated. The results of several tests thereafter were also negative. There was no history of chancre nor of secondary eruption. The patient stated that since a few months after the doubtful Kline test had been made, he had suffered repeated attacks of precordial pain, some of which were associated with "dropped beats." A physician consulted at that time had made roentgen and electrocardiographic examinations and had told him that he had an "aortic leak" and should not do heavy work. In 1939 the condition had been at its worst, he related, and the taking of sodium bromide had helped considerably. In the week prior to admission, he had fainted three times, each time while doing heavy labor and stooping over.

Physical examination gave absolutely negative results. The pulse rate was 80, and the blood pressure was 120 systolic and 74 diastolic. Urinalysis gave negative results, and a blood count was normal. The results of the Kahn test were negative, as were those of roentgen examination of the heart (fig. 1B). The electrocardiogram showed a rate of 84. The T wave in lead 4 was inverted, varying from −0.95 to −1.15 millivolts. This was considered an abnormal finding. The following precordial leads were then taken: CF 1 to 6, 4 R and 4 L (fig. 3). In all these leads except CF 6, the abnormality persisted. Lead 4 F was then taken with the patient supine, sitting, standing, standing in deep inspiration, standing in deep expiration, in the left lateral recumbent position and in the right lateral recumbent position. The abnormality persisted in all these leads except the one when the patient was standing in deep inspiration.

A diagnosis of neurocirculatory asthenia of mild degree was made. The patient was discharged to full duty August 18.

DISCUSSION

The fact that body build and respiration may greatly influence the electrocardiogram was pointed out concisely by Master,[2] but in his tracings there is a large initial upward deflection of the QRS complex in the chest lead. The influence of respiration is here shown to cause an inversion of this wave. In the case presented, the fact that the deflection was downward at first examination led to confusion and an attempt to ascertain the cause of this difficulty.

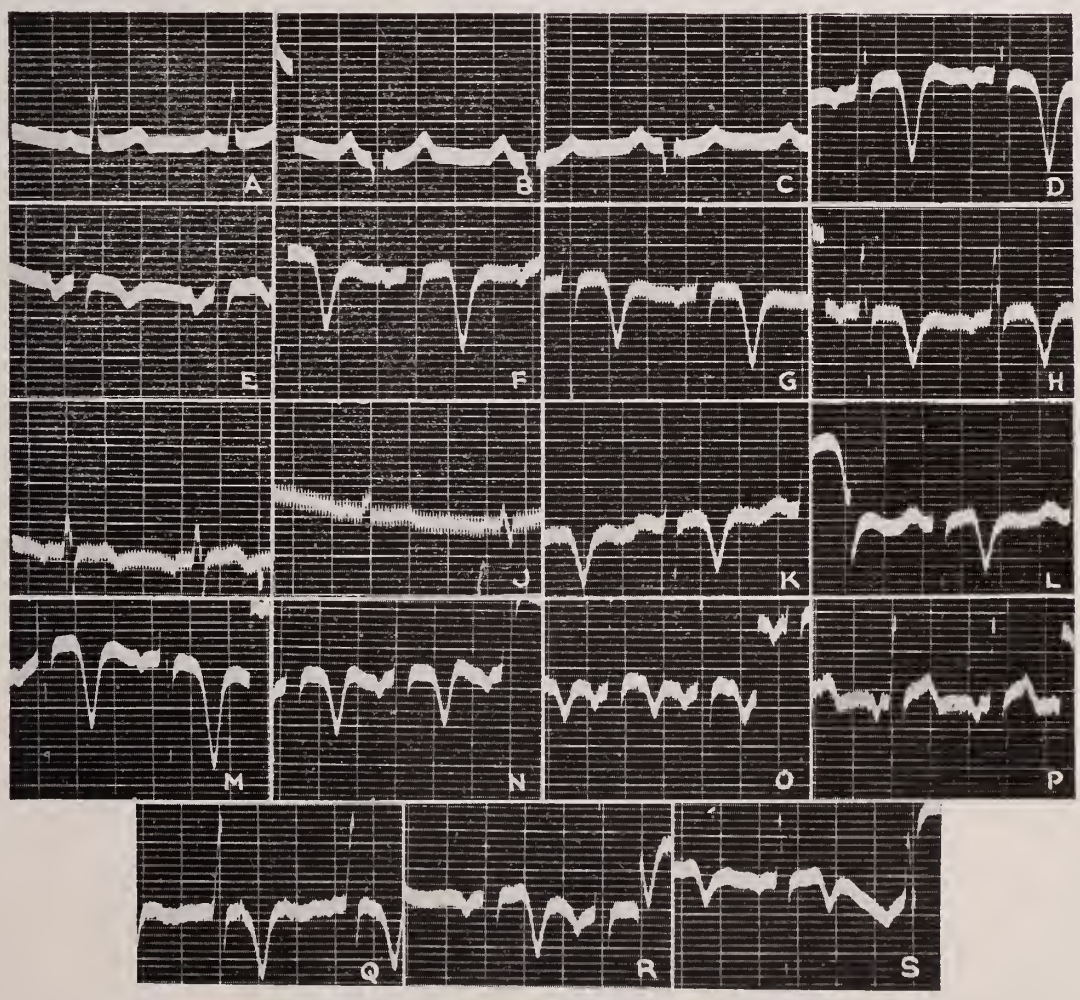


Fig. 3.—Electrocardiograms of Case 2. A, B, C and D are standard leads; E, F, G, H, I and J are leads CF 1 to 6; K is lead 4 R; L is lead 4 L; M is lead 4 F with the patient supine; N is lead 4 F with the patient sitting; O is lead 4 F with the patient standing; P is lead 4 F with patient standing in deep inspiration; Q is lead 4 F with the patient standing in deep expiration; R is lead 4 F with patient in the left lateral recumbent position; S is lead 4 F with the patient in the right lateral recumbent position.

The first impulse was to conclude that this patient, who had just manifested symptoms somewhat resembling those of an acute anginal episode, really presented the syndrome of coronary occlusion in a young person. The bizarre complaints of the patient, however, and the frequently changing symptoms involved in his complaints led to the more thorough study finally made and to the correct diagnosis.

In line with the work done by Master[2] and his associates, the inverted T wave in lead 4 led to the taking of electrocardiograms in various positions and at various phases of respiration. The tracings conclusively show the influence of position and respiration on the T wave of the chest lead. In Master's work, expiration was shown to cause the inversion of the T wave in the chest lead, but in the case presented here, the initial electrocardiogram revealed a T wave of unusually great inversion. The total effect of the altered position and phase of respiration was sufficient to raise the T wave from −1.15 millivolts to +0.25 millivolt. Scherf and Weissberg[6] demonstrated that changes in the T wave of lead 3 may occur due to changes in position.

SUMMARY AND CONCLUSIONS

Two cases are presented in which the electrocardiograms were abnormal. In both of these cases it was shown that position and respiration may exert a profound influence on the tracing.

Abnormal electrocardiographic tracings may occur in the absence of organic cardiac disease, and those who interpret them should always consider the patient and his condition foremost.

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WAR PARTICIPATION

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Shaler Richardson, M.D., Vice Chm.....*Jacksonville*
J. C. Dickinson, M.D.....*Tampa*
Walter C. Jones, M.D.....*Miami*
Gilbert S. Osincup, M.D.....*Orlando*
Carol C. Webb, M.D.....*Pensacola*

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Herbert L. Bryans, M.D., Alternate.....*Pensacola*
(Terms expire Dec. 31, 1942)
Meredith Mallory, M.D., Delegate.....*Orlando*
George M. Dawson, M.D., Alternate..*West Palm Beach*
(Terms expire Dec. 31, 1943)

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The Journal of The Florida Medical Association

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BOARD OF GOVERNORS MEETING

The Board of Governors of the Florida Medical Association held a meeting in Jacksonville at the George Washington Hotel, Sunday, September 27, at 2 p. m. A number of important matters pertaining to the business of the State Association were taken up for action.

There was a general discussion regarding the matter of holding an annual convention in 1943, since it will not be possible to meet in St. Petersburg as originally arranged. The question was deferred for the present.

An application for charter for a Nassau County Medical Society, which had previously been approved by the Council, was accepted for presentation at the next meeting of the House of Delegates.

The members present were commended for their attendance at this meeting, called on short notice, which meant a sacrifice of time as well as traveling expense. The routine business required of the Board of Governors is voluminous and the fact that only one member was absent at this meeting indicates the loyalty of the personnel of the Board. Members present were Drs. Louie Limbaugh, chairman, Shaler Richardson, J. Sam Turberville, Walter C. Jones, Gilbert S. Osincup and John R. Boling. Those present, who attended by request in an advisory capacity, were Drs. Eugene G. Peek, Edward Jelks, Meredith Mallory and Stewart Thompson.

MEETING OF WAR PARTICIPATION COMMITTEE

On Sunday, September 27, the War Participation Committee of the Florida Medical Association met at the George Washington Hotel, Jacksonville. A long and interesting session took place relative to procurement and assignment of physicians, and medical care of the citizens of Florida. To furnish Florida's quota of physicians for the armed services and at the same time to provide medical care for our citizens in all parts of the state is an acute problem. The leaders of organized medicine are facing such problems with courage and loyalty and will render to the government and to the citizens of the state every service within their power.

Members attending this meeting were Drs. Edward Jelks, chairman, Shaler Richardson, vice chairman, J. C. Dickinson, Walter C. Jones and Gilbert S. Osincup. Others present, who were requested to attend in an advisory capacity, were Drs. Louie Limbaugh, J. Sam Turberville, John R. Boling, Meredith Mallory, Eugene G. Peek, Robert B. McIver and Stewart Thompson.

A.M.A. CANCELS MEETING

Announcement has been made that the American Medical Association will not hold its Ninety-Fourth Annual Session scheduled to convene in San Francisco in 1943. The annual session was called off by the Board of Trustees. This is the third time in the history of the Association that an annual session has been cancelled, and the first time since 1862.

The A. M. A. House of Delegates, the Board of Trustees, the Scientific Councils and the officials of the Association will be called into session to deal with the affairs of the Association, particularly the many war time responsibilities being borne by the medical profession. This meeting will be held in Chicago in June, 1943, in order to place the minimum stress on the time of physicians concerned and on the transportation facilities of the nation.

NASSAU COUNTY MEDICAL SOCIETY APPLIES FOR CHARTER

At the request of the doctors of Nassau County, Dr. L. Y. Dyrenforth, councilor of the third district, and Dr. Stewart Thompson, managing director, attended a meeting September 11

in Fernandina. Seven local doctors were present: Drs. D. G. Humphreys, George A. Dame, W. A. Brewster, Lyman L. Bunker, H. B. Dickens, Jr., Carl Lungerhausen and Ellsworth F. Waite. Dr. C. C. Fuqua was unable to be present, but later signed the application for charter. A local society was organized and the following officers elected: president, Dr. George A. Dame; vice president, Dr. David G. Humphreys; secretary-treasurer, Dr. Ellsworth F. Waite.

On September 24 this society held a second meeting and drafted their constitution and by-laws. An application for charter, signed by eight physicians of the county, has been approved by the Council and accepted by the Board of Governors, to be presented at the next meeting of the House of Delegates for official action. There is a fine group of physicians in Nassau County and this new component unit of the State Association will be heartily welcomed.

POLICIES GOVERNING INITIAL APPOINTMENT OF MEDICAL OFFICERS

The Surgeon General of the Army published detail information concerning policies governing the initial appointment of physicians as medical officers on April 23, 1942. Necessary changes are given wide publicity, at his request, in order that the individual applicants, and all concerned in the procurement of medical officers, may know the status of such appointments.

The current military program provides for a definite number of position vacancies in the different grades. The number of such positions must necessarily determine the promotion of officers already on duty and, in addition, the appointment of new officers from civilian life. Such appointments are limited to qualified physicians required to fill the position vacancies for which no equally well qualified medical officers are available. Such positions calling for an increase in grade should be filled by promotion of those already in the service, insofar as possible, and not by new appointments.

If this policy is not followed, it would definitely penalize a large number of well qualified lieutenants and captains already on duty by blocking their promotions which have been earned by hard work. In view of these facts it has been deemed necessary to raise the standards of training and experience for appointment in grades above that of first lieutenant.

With this in view, the Surgeon General has announced the following policy, which will govern action to be taken on all applicants after September 15, 1942:

All appointments will be recommended in the grade of first lieutenant with the following exceptions:

Captain.—1. Eligible applicants between the ages of 37 and 45 will be considered for appointment in the grade of captain by reason of their age and general unclassified medical training and experience.

2. Below the age of 37 and above the age of 32, consideration for appointment in the grade of captain will be given to applicants who meet all of the following minimum requirements:

(a) Graduation from an approved medical school.

(b) Internship of not less than one year, preferably of the rotating type.

(c) Special training consisting of three years' residency in a recognized specialty.

(d) An additional period of not less than two years of study and/or practice limited to the specialty.

3. Eligible applicants who previously held commissions in the grade of captain in the Medical Corps (Regular Army, National Guard of the United States, or Officers Reserve Corps) may be considered for appointment in that grade provided they have not passed the age of 45 years.

Major.—1. Eligible applicants between the ages of 37 and 55 may be considered for appointment under the following conditions:

(a) Graduation from an approved school.

(b) Internship of not less than one year, preferably of the rotating type.

(c) Special training consisting of three years' residency in a recognized specialty.

(d) An additional period of not less than seven years of study and/or practice limited to the specialty.

(e) The existence of appropriate position vacancies.

(f) Additional training of a special nature of value to the military service, in lieu of the foregoing.

2. Applicants previously commissioned as majors in the Medical Corps (Regular Army, National Guard of the United States, or Officers Reserve Corps) whose training and experience qualify them for appropriate assignments may be considered for appointment in the grade of major provided they have not passed the age of 55.

Lieutenant Colonel and Colonel.—In view of the small number of assignment vacancies for individuals of such grade, and the large number of reserve officers of these grades who are being called to duty, such appointments will be limited. Wherever possible, promotion of qualified officers on duty will be utilized to fill the position vacancies.

Much misunderstanding has arisen concerning recognition by specialty boards and membership in specialty groups. It will be noted that mention is not made of these in the preceding paragraphs. This is due to the variation in requirements of the different boards and organizations. Membership and recognition are definite factors in determining the professional background of the individual but are not the deciding factors, as so many physicians have been led to believe.

The action of the grading board, established by the Surgeon General in his office, is final in tendering initial appointments. Proper consideration must be given such factors as age, position vacancies, the functions of command and original assignments. All questionable initial grades are decided by this board. Owing to the lack of time, no reconsideration can be given.

There are in the age group 24-45 more than a sufficient number of eligible qualified physicians to meet the Medical Department requirements. It is on this age group that the Congress has imposed a definite obligation of military service through the medium of the Selective Service Act. The physicians in this group are ones needed now for active duty. The requirements are immediate and imperative. Applicants beyond 45 years may be considered for appointment only if they possess special qualifications for assignment to positions appropriate to the grade of major or above.

"FOUND: A ONE-DAY CURE FOR SYPHILIS"

In the *Reader's Digest* for September appears an article by Paul de Kruif entitled "Found: a One Day Cure for Syphilis," heralded by the editors of that periodical as "the medical sensation of the year." In this article Mr. de Kruif states that "now there actually is promise of a one day cure." He asserts without, of course, any basis in fact that "the standard eighteen month course of treatment is too painful, too dangerous, too prolonged for the mass cure of early syphilis." After describing certain experiments conducted by Drs. Walter M. Simpson, H. Worley Kendell and Donald L. Rose in the Miami Valley Hospital, he concludes:

> With a one day cure available, with plenty of doctors and nurses trained in fever therapy, and using equipment which costs little war material, we ought really to begin to wipe out the horror of syphilis. There are a million active cases in the United States. With this powerful new treatment, all persons found infected with active syphilis could be taken out of circulation and their danger to the community quickly abolished. The immediate expansion of this chemothermic treatment should bring hope to those countless hundreds of thousands who are inadequately treated or who are not treated at all. In the meantime, all those now under standard treatment should continue it until the new chemothermic treatment becomes generally available; this for their own as well as for the public safety.

As nearly as can be determined, all this effusion is based on a few paragraphs from an article on fever therapy by Drs. Walter M. Simpson, H. Worley Kendell and Donald Rose, published in the *British Journal of Venereal Diseases* for January-April 1941, in which the authors state:

> The present plan of treatment is as follows: A ten hour session of fever at 106 F. (41.1 C) has been adopted tentatively as the initial unit of fever, since these limits have proved to be safe and practical in the management of patients with refractory gonococcic infection. Prior to the fever session a single injection of 4 grains of insoluble bismuth is administered intramuscularly. During the first seven hours of the height of fever, 240 mg. of mapharsen are administered intravenously by the slow intravenous drip method. No additional antisyphilitic therapy is given.

To this they append the following highly conservative opinion:

> While no conclusions are permissible since the period of post-therapy observation is as yet less than two years, the prompt resolution of clinical symptoms and the favorable serologic responses would indicate that further diligent inquiry is demanded. The results of this purely experimental undertaking will be made the subject of a later report.

In their ultimate "conclusions" they say:

> At the present time such treatment should be considered strictly experimental.
>
> The results achieved thus far should stimulate other investigators to engage in long term, controlled experiments with a view to the introduction of a more rapid, more certain, less dangerous and less costly method of treatment.

In a review of syphilis to appear soon in the *Archives of Internal Medicine*, Drs. Frank W. Reynolds, Charles F. Mohr and Joseph Earle Moore of Baltimore say:

> With his usual uncritical judgment, hyperenthusiasm and willingness prematurely to capitalize journalistically on sober scientific experimentation, de Kruif has unhappily drawn nationwide attention to this "one day cure" for syphilis. This tendency of medical journalists to raise false hopes in lay minds can only be deplored. With all due respect to democratic freedom of speech, it is too bad that no censorship exists to compel conservative accuracy from medical sensationalists.

This is another instance in which Mr. de Kruif has expanded preliminary medical investigations into announcements to the public that go far beyond anything that the available evidence could warrant. The Journal is being deluged with letters from physicians indicating that the article already is doing great harm in creating dissatisfaction among persons with syphilis as to time that may be required to bring about cure. Dr. Walter M. Simpson is an officer in the Bureau of Medicine and Surgery of the United States Navy and has been for some months away from contact with the continental United States. It is unfortunate that in his absence the statements of Mr. Paul de Kruif should have placed him and his research in such an unenviable position before the medical profession.

Editorial, J. A. M. A. **120**: 48-49 (Sept. 5) 1942.

BIRTHS AND MARRIAGES

BIRTHS

Dr. and Mrs. John W. Dix of Coral Gables announce the birth of a daughter, Sandra, on August 16.

Dr. and Mrs. O. E. Harrell of Jacksonville announce the birth of a daughter, Mary Jane, on September 23.

MARRIAGES

Dr. Wilburn C. Young of Canal Point and Miss Cora Mitchell of Pahokee were married on July 31.

Dr. Louis George Lytton of Miami Beach and Miss Florence Bender of Brooklyn were married on September 15.

Dr. Eugene D. Simmons and Miss Bobbie Dowling Conoly of Jacksonville were married on September 16.

STATE NEWS ITEMS

The 36th Annual Meeting of the Southern Medical Association will be held at Richmond, November 10, 11 and 12. Distinguished physicians both from the North and South will discuss, among other phases of medicine and surgery, the special problems created by the war.

Dr. Sarah P. White of Tallahassee addressed the women of Jackson County in Marianna, September 9, on the importance of women making readjustments essential during the current war and the stabilization of social life in war time and during rehabilitation following the war.

Dr. Irby H. Black of Live Oak was guest speaker of the Kiwanis Club in the Suwannee Hotel, July 31.

Dr. C. J. Heinberg of Pensacola was appointed in July as civil aeronautics administration medical examiner, to examine applicants for enlistment in the air corps.

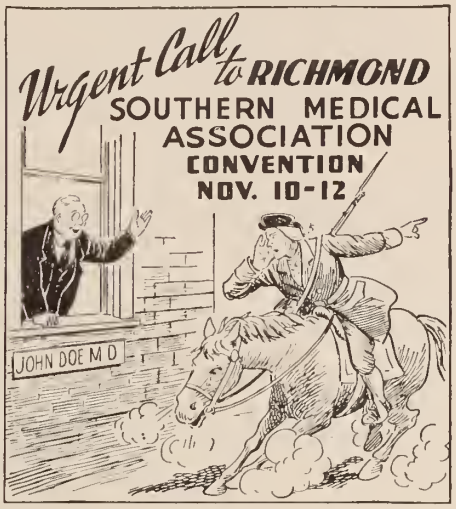
Dr. Sanford C. Colley of Mount Dora has been named permanent chairman of the Florida Crippled Children's Commission. The appointment was effective the latter part of July.

Dr. Edgar Austin of Plant City was program chairman and principal speaker at the meeting of the local Lions Club the latter part of July.

Dr. W. E. Van Landingham of West Palm Beach spent two weeks the early part of August visiting clinics in the North.

Dr. W. Wardlaw Jones of Dade City was the principal speaker at the Kiwanis Club luncheon, August 11, at the Edwinola Hotel. Dr. Jones' subject was "Medicine in Victory."

Dr. J. C. Dickinson of Tampa, Dr. Annette Feaster of St. Petersburg, and Dr. W. McL. Shaw of Jacksonville attended the recent annual meeting of the American Roentgen Ray Society in Chicago. Dr. Dickinson was elected to the Executive Council of the Society for a period of three years.



PHYSICIANS of the South have an urgent call to Richmond for the annual meeting of the Southern Medical Association, Tuesday, Wednesday and Thursday, November 10-11-12 — a great wartime meeting. In the general clinical sessions, the twenty sections, the four independent medical societies meeting conjointly and the scientific and technical exhibits, every phase of medicine and surgery will be covered—the last word in modern, practical, scientific medicine and surgery. Addresses and papers will be given by distinguished physicians not only from the South but from other parts of the United States.

REGARDLESS of what any physician may be interested in, regardless of how general or how limited his interest, there will be at Richmond a program to challenge that interest and make it worth-while for him to attend.

ALL MEMBERS of State and County medical societies in the South are cordially invited to attend. And all members of state and county medical societies in the South should be and can be members of the Southern Medical Association. The annual dues of $4.00 include the Southern Medical Journal, a journal valuable to physicians of the South, one that each should have on his reading table.

SOUTHERN MEDICAL ASSOCIATION
Empire Building
BIRMINGHAM, ALABAMA

ROBERT ERNEST GILBERT

Dr. Robert E. Gilbert, leading physician and surgeon of Winter Haven for eighteen years, died suddenly at midnight, August 6 in Meridian, Miss.

The death of Dr. Gilbert, affecting Winter Haven more keenly than that of any other citizen in years, came at the height of a career dedicated wholly to the relief of suffering humanity. Only 51 years of age on August 2, Dr. Gilbert was a native Floridian, the son of Mrs. Jennie E. Gilbert and the late R. M. Gilbert of Monticello, Jefferson county. After graduating from the schools of his home town, he attended Emory University, and then served his internship at St. Luke's Hospital in Jacksonville. Having graduated before the United States entered the World War, he enlisted and rendered meritorious service in the medical air corps until after the Armistice. He then returned to Monticello and practiced medicine there and at Lloyd's Community near that city until February, 1924, when he located in Winter Haven.

As a physician and surgeon, Dr. Gilbert stamped his personality and his skill indelibly on the life of thousands of people with whom he came in contact. His kindly understanding nature, his happy smile and cheerful demeanor proved a benediction in the sick room. He literally gave his entire life to the amelioration of sickness and disease and in promoting those things that made for a healthier, happier brighter community. This attribute extended to various phases of activity in the community, for he was liberal in his support of charitable and religious and civic organizations, a leader in securing the new hospital for the city, in promoting the work of the local and Polk county medical societies, both of which he had served as president, and in his membership in the State Medical Association. He was a member of the First Baptist Church, of the Masonic Order, of the Kiwanis Club and of the American Legion.

Surviving Dr. Gilbert are his aged mother, Mrs. Jennie E. Gilbert of Monticello, Fla., his wife, Mrs. Emily Gilbert, two daughters, Emily and Shirley, and one son, Robert Ernest, Jr., all of Winter Haven; two sisters, Mrs. D. D. Diffenwierth of Tampa, and Miss Lily Gilbert, Monticello, and a brother, R. M. Gilbert of Monticello.

Dr. Gilbert was by common acclaim recognized as Winter Haven's premier citizen and the spontaneous tribute paid him at the obsequies attested to the deep love in which he was held by the people in all walks of life and by both the white and colored races.

In addition to the Legionnaires who came in a large body, the services were attended by members of the medical societies of Winter Haven and Polk county, by the druggists of the city, by members of the dental association and by nurses of the city and the Winter Haven General Hospital. By unanimous action of officers of the Merchants Association, all local business houses closed their doors between the hours of 3 and 5 and for two hours commerce and industry halted to pay tribute to a great and good and lovable fellow citizen as he was borne to his last resting place.

OMER FRANK ALLEN

Dr. Omer F. Allen of Miami died on August 24, at the age of 70. He had been a resident of Miami for twenty-three years.

Born at Mt. Vernon, Ill., Dr. Allen received his education at the Mt. Vernon High School, the University of Chicago and Rush Medical College.

He was president of the First National Bank of Mt. Olive, Ill., for fourteen years, city treasurer for a number of years, and township treasurer for three terms. He was physician for the Illinois Central Railroad at Mt. Olive for twelve years, serving also as physician for several of the leading coal companies in that vicinity. He was a member of the examining board during World War I.

Dr. Allen was a member of the Masonic Lodge, the Shrine and the Elks Club at Mt. Olive. He was a member of the Dade County Medical Society, the Florida Medical Association, and the American Medical Association. The following tribute to Dr. Allen appeared editorially in the *Miami Herald*:

> In the death of Dr. Omer Frank Allen Miami lost a substantial citizen and the medical profession a man who reflected credit and honor upon the fraternity.
>
> In the more than two decades he practiced here Dr. Allen became widely known for his success in medicine and beloved for his personal attributes.
>
> He was of that regrettably fast vanishing medical school, the general practitioner, who inspired confidence, who knew not only the bodily ills of the families he treated, but their spiritual and financial ailments, which often aggravated, if they did not cause, the sicknesses about which they consulted him. His life here was a contribution to the community.

COMPONENT COUNTY SOCIETIES

DESOTO-HARDEE-HIGHLANDS-CHARLOTTE-GLADES

The regular meeting of the DeSoto-Hardee-Highlands-Charlotte-Glades County Medical Society was held on the evening of September 11 at Wauchula. Dr. Lynne E. Baker, Director, Division of Tuberculosis, Florida State Board of Health, was guest speaker. He showed a film on "Artificial Pneumothorax."

PASCO-HERNANDO-CITRUS

Dr. R. D. Sistrunk of Dade City was host to the Pasco-Hernando-Citrus County Medical Society, Thursday evening, September 10. Dinner was served at the Edwinola Hotel, after which a scientific meeting was held in the parlor of the hotel. Dr. S. C. Harvard of Brooksville presented two interesting clinical reports, which were discussed by all those present. Dr. C. L. Carter of Inverness invited the members of the society to be his guests at the October meeting.

Present at this meeting were: Drs. C. L. Carter, G. R. Creekmore, S. C. Harvard, W. Wardlaw Jones, W. B. Moon, R. D. Sistrunk and W. H. Walters.

PINELLAS

At the meeting of the Pinellas County Medical Society held at the Shrine Club, St. Petersburg, on Friday evening, September 4, several members reported on clinics which they had attended during the summer.

A round table meeting was held in Clearwater, September 18; Dr. John Hagood acted as moderator.

POLK

A called meeting of the Polk County Medical Society was held at the Lake Region Hotel in Winter Haven on Thursday evening, August 6. Dr. Herman Watson was elected to the medical procurement and assignment committee to fill the vacancy created by the death of Dr. R. L. Cline. Mrs. M. Sand, executive secretary of the Polk County Tuberculosis and Health Association, presented a plan for a survey to be conducted this fall, which plan was approved in its entirety.

PUTNAM

The Putnam County Medical Society has joined the honor roll of societies whose members' dues are 100 per cent paid. Dr. J. Worth Brantley is the president of this society, and Dr. C. M. Knight is secretary-treasurer.

ABSTRACT DEPARTMENT

Members of the Florida Medical Association who have had articles published in out-of-state medical journals are requested to forward such journals or reprints to Box 1018, Jacksonville, for abstracting in this department.

TOMORROW'S CHILDREN, OUR RESPONSIBILITY TODAY, QUILLIAN, WARREN W., CORAL GABLES, SOUTH. M. J. 35: 77-79 (JAN.) 1942.

Dr. Quillian discusses briefly several phases of the tremendous problem of the responsibility of present toward future generations in the United States. He mentions that draft boards have rejected from 28 to 42 per cent of selectees owing to physical and mental defects, and recalls that many of these men were children during the depression period of 1930-1940, when from one-half to one-third of the population was on relief, and in many instances could not afford the essentials of proper nutrition.

He directs attention to the fact that almost 1,000,000 children of school age are not attending school because the facilities in new defense areas are inadequate for the number of migratory workers who travel with their families. He makes a plea for increased participation on the part of pediatricians and educators in the school health program, as well as for improvement in the conduct of and facilities for school examinations so that they will be less apt to produce in parents a sense of false security.

The author stresses the necessity for a balanced diet with sufficient vitamins and quotes W. H. Sebrell of the National Institute of Health who stated that approximately one-third of the population of the United States is below par physically and mentally due to dietary deficiency. Statistics are quoted indicating the presence of defective vision and hearing, dental caries and other remedial defects among children.

Dr. Quillian points out that the mental health of the succeeding generations may be considerably altered due to wartime stress, such as the death of one parent, or the employment of both parents in defense industries. He fixes a large part of the responsibility for the improvement of these conditions on the shoulders of pediatricians and educators, who are in a position to contribute much toward the strengthening of the mental, physical and moral fiber of our children.

BORIC ACID POISONING; CASE REPORT, PEYTON, H. A. JACKSONVILLE, AND GREEN, D., MEMPHIS, SOUTH. M. J. 34: 1286-1288 (DEC.) 1941.

A report is made of a case of acute boric acid poisoning. With admirable restraint and honesty, the cause of the acute poisoning is reported thus: "Several hours after 700 cc. of solution had been administered [by hypodermoclysis] it was brought to the attention of the attending staff that by error the patient had received a 4 per cent boric acid solution representing an intake of 28 grams of boric acid."

The symptoms were: pronounced erythema of the whole body, followed by desquamation, a dry nonproductive cough, sore throat, great abdominal distention, diffuse abdominal pain, nausea and vomiting, a low grade fever, and signs of renal injury, complicated by a colon bacillus pyelonephritis. Treatment was directed toward improving renal function and excretion. The authors suggest that owing to the displacement of chloride by the borate ion and the fall in blood chloride concentration the use of salt in sufficient amounts to restore a normal level in the blood is important.

ADVERTISERS' NOTES

THE IMPORTANCE OF SPECIFICATION

Some physicians think it is commercial to specify a maker's name.

On the other hand, a physician of international reputation and unimpeachable standing has expressed himself as follows:

"I invariably specify Mead's whenever I can, because I feel that when I don't specify a definite brand, the effect may be the same as though I were to specify that any brand would do.

"By not specifying, I let down the bars to a host of houses, many entirely unknown to me and others deserving no support at my hands.

"When I specify Mead's I may be showing favoritism, but at least I know that I am protecting my results. If, at the same time, my self-interested act encourages a worthy manufacturer to serve me better, I can see no harm in that."

Mead Johnson & Company, Evansville, Ind., U.S.A., have to depend upon the physician to specify MEAD'S because they do not advertise or "merchandise" their products to the public.

PEPTIC ULCER FILM AVAILABLE

There is now available for free showings before groups of physicians the first complete movie film on peptic ulcer, in color and with sound track.

The film is entitled "Peptic Ulcer" and was produced under the direction of the Department of Gastroenterology of the Lahey Clinic of Boston. The American College of Surgeons has awarded its seal of approval to the film.

Running time of the film is 45 minutes, 1600 feet of 16 mm. film, and covers a presentation of the following problems of peptic ulcer: pathogenesis, diagnosis, treatment, pathology, complications including obstruction, hemorrhage and perforation, gastric ulcer, surgery and jejunal ulcer.

Arrangements for a showing of the film may be made by writing to the Professional Service Department of John Wyeth and Brother, Inc., Philadelphia, who will provide projection equipment, screen, film, and operator for medical groups, without charge.

A TIMELY READING CARD

To do its bit in the promotion of United States War Savings Bonds, American Optical Company, in cooperation with the War Savings Staff of the Treasury Department, has prepared a new professional reading card which emphasizes this aspect of the Nation's war effort. Not for sale, these cards are to be given by AO representatives to professional men as an evidence of AO's desire to cooperate in promoting sale of U. S. War Bonds.

The message on the cards is a dignified, informative statement concerning War Bonds and the citizen's duty to buy them. The suitableness of a medium such as professional reading cards for the promotion of War Bonds is self-evident. Such cards are read by people in all walks of life, and at the moment when they are highly conscious of their reading ability.

An appeal in such form, AO believes, should go far toward cementing Dr.-Patient good-will at a time when emotions run high and a feeling of united effort is prevalent.

SQUIBB RECEIVES "E" PENNANT

Presentation of the coveted Army-Navy "E" Pennant to E. R. Squibb and Sons was witnessed by more than 2,000 employees in the grand ballroom of the Waldorf-Astoria Hotel, New York City, on Friday night, September 18. The pennant was presented by Rear Admiral Harold W. Smith, (MC) USN, Chief of the Navy's Research Division of Bureau of Medicine and Surgery, to Carleton H. Palmer, Chairman of the Squibb board.

With the pennant went insignia of excellence to each of the employees of the company which manufactures critical drugs, biologicals, and other medical essentials for the armed forces. Brig. General Larry B. McAfee, Assistant to the Surgeon General of the United States Army, presented token "E" buttons to four employees, 3 women and 1 man, selected from four Squibb departments in which service entails personal hardship and risk of health and even life in supplying of medical needs for the Army and Navy.

One of the pin recipients was Miss Anna Masterson, employed in the manufacture of anti-typhus vaccine.

"Not one Squibb worker engaged in this perilous occupation escapes the typhus infection," declared General McAfee in giving Miss Masterson her button. "To some degree or other—each becomes ill—distressingly ill—may even die. They face this distress—this peril, to protect others."

Citing the fact that many of the workers in the Squibb "civilian army" are in peril "every minute of every hour of every working day," General McAfee told of the task of Miss Lotti Kuras, who has two brothers in the Army and one in the Navy. Miss Kuras "fills glass ampuls with a liquid that must be handled at a temperature of ninety degrees below zero—then sealed with a scaring hot flame" said General McAfee, declaring that "despite every precaution known, everyone engaged in this delicate hazardous work at some time or other is cruelly, painfully, sometimes dangerously burned by the excessive heat or cold."

The only male recipient was George Brown, employed in the Sulfathiazole division. Also receiving a pin from General McAfee was Miss Mary Murtha,

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who works in the laboratories which prepare hypodermic solutions.

Speaking of the danger faced by Squibb employees, despite their civilian status, General McAfee said: "They face this distress, this peril, to protect others. A soldier can do no more! This Army-Navy "E" for excellence seems a mild reward—a modest citation for your perilous occupation."

In presenting the pennant to Mr. Palmer, Admiral Smith declared: "Your ability to supply the armed forces with critical drugs, biologicals, and many other essentials makes it possible for the services to maintain the high standard of performance in life saving that began at Pearl Harbor." Speaking of the global aspects of the war, Admiral Smith pointed out that not only must we fight the enemy in every part of the world, "but they fight disease which is ever-present in foreign fields."

BOOKS RECEIVED

Acknowledgment of books received will be made in this column and this will be deemed by us a full compensation to those sending them. A selection will be made for review as expedient.

PHYSICIANS REFERENCE BOOK OF EMERGENCY MEDICAL SERVICE. The book is designed to acquaint physicians and surgeons in the United States with professional literature not readily available here regarding medical and surgical problems arising from the impact of modern warfare on the civilian population. It presents briefly the practical experience and lessons acquired in handling civilian casualties. It has been compiled mainly from British medical literature, but also in part from American sources. The subject matter relates chiefly to the manner in which ordinary civilian accident practice must be modified to deal with injuries from crushing, blasts, bombs and burns, and resulting shock, encountered in air raids. Paper. Pp. 268, with illustrations. New York: E. R. Squibb & Sons, 1942.

THE NATIONAL FORMULARY, SEVENTH EDITION. Prepared by the Committee on National Formulary of the American Pharmaceutical Association. Official from November 1, 1942. The National Formulary is revised under the direct authority and supervision of the Council of the American Pharmaceutical Association. Fabrikoid. Pp. 690. Washington, D. C.: American Pharmaceutical Association, 1942.

MEDICOLEGAL PHASES OF OCCUPATIONAL DISEASES: AN OUTLINE OF THEORY AND PRACTICE. By C. O. Sappington, A.B., M.D., Dr. P.H, Consultant, Occupational Diseases and Industrial Hygiene. In the Preface, the author states: "Any critical analysis of a medicolegal problem in occupational disease involves a consideration of all the aspects of the occupational disease problem as a whole, including the measurement and evaluation of industrial exposures; interpretation and application of information relating to physical examinations, diagnoses, clinical laboratory work and x-ray findings; the correlation of industrial and medical information in terms of cause-and-effect relationships; occupational disease legislation; case decisions of damage suits; commission hearings, and review decisions; and insurance coverage. The complicated ramifications of the problems relative to occupational diseases are thus evident." Written in nontechnical language, the book is divided into five parts: (1) Industrial, (2) Insurance, (3) Medical, (4) Legal, (5) Appendix. Twenty-nine tables give valuable information. Cloth. Pp. 405; illustrated. Chicago: Industrial Health Book Company.

THE VITAMINS AND THEIR CLINICAL APPLICATION. By Prof. W. Stepp, Docent Kuhnau, Dr. H. Schroeder and H. A. H. Bouman, M. D., translator. This enlightening and intensively practical manual on vitamins has recently been translated by H A. H. Bouman, M. D., of Minneapolis, and should be of interest to every physician who wants to understand the use of vitamins in his daily practice. It takes up each of the known vitamins separately, giving its history, chemistry, determination, occurrence, manifestations, absorption, clinical application, physiology, preparation and dosage. Included is a chart of the survey of vitamins known today and a chart showing contents of essential vitamins in various diets. Cloth. Pp. 173; price, $4.50. The Wisconsin Cueno Press, Inc. This book is available from the Vitamin Products Company, Milwaukee, Wisconsin.

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$15,000.00 ACCIDENTAL DEATH $75.00 weekly indemnity, accident and sickness	For $96.00 per year

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HYGEIA

THE RESPONSIBILITY OF THE WOMAN'S AUXILIARY TOWARD HYGEIA

Not all members of the Auxiliary realize that the promotion of Hygeia is a responsibility placed on their shoulders by the House of Delegates of the American Medical Association. An article which appeared in the December 1941 issue of the Wisconsin Medical Journal gives information as to why and how a Hygeia campaign should be conducted. I am passing it on to you in the hope that it may be of some benefit in securing your quota of subscriptions this year.

One of the most important responsibilities that is given to the Woman's Auxiliary to the American Medical Association is getting Hygeia into offices, schools, homes, and other places where it will be read. The magazine is carefully planned, prepared and published for the information of those who would not be reading The Journal of the American Medical Association. The authors of the articles in Hygeia have the great general public in mind—their needs, their curiosity, their bewilderments, their protection. Each number of the magazine carries a well balanced assortment of material which is interesting and useful to a wide variety of readers.

But planning a magazine, getting articles to publish in it, and having it ready for the reading public is not enough. There must be someone interested in getting it read. The promotion of the distribution of Hygeia, then, was requested of the Auxiliary by the House of Delegates of the American Medical Association at its annual meeting in Philadelphia in 1931. The following resolution was passed:

WHEREAS, The periodical Hygeia, the health magazine published by the American Medical Association, is the only authentic health periodical available in this country, and

WHEREAS, This periodical was established by the Board of Trustees on recommendation of the House of Delegates to be the official voice of the American Medical Association in educating the public in matters of health, and

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"Sa-a-ay!" Joe says, "You ought to be in pictures!"

And that's worth more than orchids—to Mary. That's one of the little things that make big differences to all of us.

Little things . . . nice trifles . . . simple pleasures . . . that make your good days better, help you through the bad ones. That's what keeps you smiling. That's morale.

* * *

It happens that millions of Americans attach a special value to their right to enjoy a refreshing glass of beer . . . in the company of good friends . . . with wholesome American food . . . as a beverage of moderation after a good day's work.

A small thing, surely—not of crucial importance to any of us.

And yet—morale is a lot of little things like this. Little things that help to lift the spirits . . . keep up the courage.

And, after all, aren't they among the things we fight for?

BREWING INDUSTRY FOUNDATION

WHEREAS, It is the best medium for reaching the teachers of the young, and the pupils in schools throughout the country, informing them of the progress of medical science and of scientific means for the prevention of diseases; therefore be it

Resolved, That the House of Delegates urge the Woman's Auxiliary of the American Medical Association, including the county, state and national organizations, to recognize as one of its chief activities, if not its primary function, to promote the distribution of this publication through parent-teachers' associations, boards of education, and similar bodies interested in education.

There before us is the responsibility to promote the distribution of Hygeia, with which we were charged ten years ago. May we ask each Hygeia chairman, each auxiliary president, each officer, each committee chairman, and each member of an auxiliary, to start back at the beginning in her thinking of Hygeia. Remember and realize what the purpose of this publication is, and in what manner we have been asked to promote its distribution.

1. Make an analysis of what methods are used in your group for promotion of Hygeia.
2. Honestly analyze your results, and see whether they are commensurate with your efforts.
3. Study your group and your community (county or counties) and decide upon the most effective methods of promotion.
4. Try to find out why you are able to sell Hygeia and why you are not able to do so. Keep these answers for discussion within your group.
5. Work out the best plan you can for your organization, to get the most possible subscriptions for Hygeia into the hands of people who will read it.

Later this year it would be splendid for all the Hygeia workers in the state to work out a composite plan and compare notes and ideas. We might find new ways to use our old ideas, and perhaps find entirely new methods of interesting the reading public in Hygeia. Let us be thinking about an exchange of ideas, and do write to the state Hygeia chairman with questions, plans that work or do not work, suggestions, and anything in the interests of our health magazine.

If I can be of further assistance, please command me.

MRS. P. J. MANSON
State Chairman, Hygeia



HYGEIA
The Health Magazine

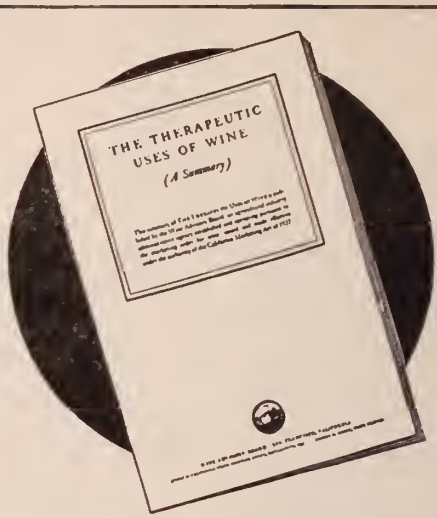
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THE THERAPEUTIC USES OF WINE

(mailed free upon request)

There has developed an interest within the medical profession that the true physiologic and therapeutic uses and deficiencies (and also the food values) of wine be authoritatively reviewed. Such a review has been prepared in monograph form by qualified and competent medical authorities and constitutes a summary of the pertinent scientific literature of present-day medicine.

The contents include sections on wine as a food, and the actions of wine on the gastro-intestinal system, the cardio-vascular system, the genito-urinary system, the nervous system and the muscles, and the respiratory system. The uses of wine in diabetes mellitus, in acute infectious diseases and in treatment of the aged and convalescent are also discussed. The value of wine as a vehicle for medication is dealt with, and an important section on the contraindications to the use of wine is included. An extensive bibliography is presented for those who may wish to pursue the subject further.

This review results from a study supported by the Wine Advisory Board, an agricultural industry administrative agency established under the California Marketing Act, and has been sponsored by the Society of Medical Friends of Wine.

Members of the medical profession are invited to write for this monograph. Requests should be made to the Wine Advisory Board, 85 Second Street, San Francisco.

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STATE AND SECTIONAL MEETINGS

SOCIETY	PRESIDENT	SECRETARY	ANNUAL MEETING
Florida Medical Association	Gilbert S. Osincup, Orlando	Shaler Richardson, Jacksonville	To Be Announced
Florida Medical Districts:			
A—Northwest	Courtland D. Whitaker, Marianna	Stewart Thompson, Jacksonville	Tallahassee, Postponed
B—Northeast	L. Y. Dyrenforth, Jacksonville	" " "	Ocala, Postponed
C—Southwest	Edgar Watson, Lakeland	" " "	Sarasota, Postponed
D—Southeast	William Y. Sayad, W. Palm Beach	" " "	Miami, Postponed
Alabama Medical Association	H. B. Searcy, Tuscaloosa	D. L. Cannon, Montgomery	Birmingham, Apr. 20-22, 1943
Georgia, Medical Assn. of	James A. Redfearn, Albany	E. D. Shanks, Atlanta	Atlanta, May 11-14, 1943
Florida—			
Section, Am. College Phys.	R. H. Knowlton, St. Petersburg	Kenneth Phillips, Miami	To Be Announced
Dental Society, State	I. W. Shields, Miami	W. P. Wood, Jr., Tampa	Tampa, Nov. 9-11, 1942
Derm. and Syph., Soc. of	Wiley M. Sams, Miami	Lauren M. Sompayrac, Jacksonville	To Be Announced
East Coast Medical Association	T. C. Kenaston, Cocoa	I. M. Hay, Melbourne	Melbourne, 1942
Hospital Association	Mr. Ernest G. McKay, Tampa	Mr. R. L. Martin, St. Petersburg	Tampa—Postponed
Industrial Surgeons, Assn. of	Frank D. Gray, Orlando	Richard H. Walker, Orlando	To Be Announced
Medical Postgraduate Course	Turner Z. Cason, Jacksonville	Chairman	
Nurses Association, State	Mrs. M. Stetson, St. Petersburg	Mrs. Phyllis Leonard, St. Augustine	Orlando, November, 1942
Ophthal. & Otol., Soc. of	Shaler Richardson, Jacksonville	C. E. Dunaway, Miami	To Be Announced
Pathological Society	L. Y. Dyrenforth, Jacksonville	Iva C. Youmans, Miami	To Be Announced
Pediatric Society	Ludo von Meysenbug, Daytona B.	Robert Blessing, Ft. Lauderdale	To Be Announced
Pharmaceutical Association, State	Mr. Emmett L. Brown, Palatka	Mr. R. Q. Richards, Ft. Myers	
Public Health Association	W. H. Pickett, Jacksonville	Lloyd N. Harlow, Jacksonville	Miami, Fall, 1942
Radiological Society	John N. Moore, Ocala	Walter A. Weed, Orlando	To Be Announced
Railway Surgeons' Association	Frank D. Gray, Orlando	W. C. Page, Cocoa	To Be Announced
Tuberculosis & Health Assn.	Mr. E. M. Newald, Orlando	Mrs. C. R. Whitaker, Eustis	
Chattahoochee Valley Med. Assn.	Herbert E. White, St. Augustine	Robert B. McIver, Jacksonville	Postponed
Gulf Coast Clinical Society	G. G. Oswalt, Mobile, Ala.	C. L. Rutherford, Mobile, Ala.	Mobile, 1942
S.E. Sec., Am. Cong. Phys. Ther.	John J. McGuire, Pensacola	Kenneth Phillips, Miami	
Southeastern Surgical Congress	Alton Ochsner, New Orleans	B. T. Beasley, Atlanta	Louisville, Mar. 8-10, 1943
Southern Medical Association	M. Pinson Neal, Columbia, Mo.	Mr. C. P. Loranz, Birmingham	Richmond, November 10-12, 1942
Suwannee River Medical Society	L. J. Arnold, Jr., Lake City	T. H. Bates, Lake City	Lake City, Dec. 1942

COMPONENT SOCIETIES BY DISTRICTS

	SOCIETY	PRESIDENT	SECRETARY	MEETING DATE	MEMBERS Total	MEMBERS Paid	COUNCILOR
A	Bay	J. Powell Adams, M.D. Panama City	J. O. Barfield, M.D. County Health Unit Panama City		11	10	A-1-43 C. D. Whitaker, M.D. Marianna
	Escambia *Santa Rosa	M. W. Dodson, M.D. 309 Brent Bldg. Pensacola	Alvyn W. White, M.D. 24 W. Chase St. Pensacola	2nd Tuesday 8:00 P.M.	52	51	
	Franklin-Gulf	Thos. Meriwether, M.D. Wewahitchka	J. R. Norton, M.D. Port St. Joe	3rd Tuesday Odd Months	5	4	
	Jackson *Calhoun	W. R. Wandeck, M.D. Marianna	R. N. Joyner, M.D. Marianna	2nd Tuesday 7:30 P.M.	12	100%	
	Walton-Okaloosa	A. G. Williams, M.D. Lakewood	R. B. Spires, M.D. DeFuniak Springs	3rd Thursday 8:00 P.M.	6	100%	
	Washington-Holmes	N. J. Dawkins, M.D. Vernon	B. W. Dalton, M.D. Vernon		6	100%	
B	Columbia *Baker, Hamilton	Harry S. Howell, M.D. Blanche Hotel Annex Lake City	Thomas H. Bates, M.D. Blanche Hotel Annex Lake City	1st Monday 7:30 P.M.	11	100%	A-2-44 William D. Rogers, M.D. Chattahoochee
	Leon-Gadsden-Liberty-Wakulla-Jefferson	G. H. Garmany, M.D. Midyette-Moor Bldg. Tallahassee	B. A. Wilkinson, M.D. Telephone Bldg. Tallahassee	Quarterly 3:00 P.M.	40	38	
	Madison-Suwannee	Eustace Long, M.D. Madison	E. D. Thorpe, M.D. Madison		8	100%	
	Taylor *Dixie, Lafayette	J. C. Ellis, M.D. Perry	Chas. A. O'Quinn, M.D. Perry	Last Friday 8:00 P.M.	5	100%	
	Alachua *Bradford, Gilchrist, Union	R. E. Summitt, M.D. 122 No. Pleasant St. Gainesville	Chester F. Ahmann, M.D. 1043 W. Masonic Gainesville	2nd Wednesday 7:30 P.M.	29	24	B-3-43 L. Y. Dyrenforth, M.D. Jacksonville
	Duval *Clay, Nassau	Ernest B. Milam, M.D. 508 Greenleaf Bldg. Jacksonville	T. Z. Cason, M.D., *Acting* 2033 Riverside Ave. Jacksonville	1st Tuesday 8:15 P.M.	192	100%	
	Marion *Levy	B. S. Stutts, M.D. Anderson Bldg. Dunnellon	T. Hartley Davis, M.D. 202 Commercial Bank Ocala	3rd Thursday 12:30 P.M.	29	28	
	Putnam	J. Worth Brantley, M.D. Grandin	C. M. Knight, M.D. Palatka	2nd Tuesday Even Months 7:00 P.M.	10	100%	
	St. Johns	W. D. Webb, M.D. 220 St. George St. St. Augustine	Charles C. Grace, M.D. East Coast Hospital St. Augustine	3rd Tuesday 8:30 P.M.	12	100%	
	Brevard	G. T. von Colditz, M.D. Route 1 Cocoa	I. K. Hicks, M.D. Melbourne	3rd Wednesday	11	100%	B-4-44 Meredith Mallory, M.D. Orlando
	Lake *Sumter	H. S. Cherry, M.D. Center Hill	R. H. Williams, M.D. County Health Unit Eustis	1st Thursday 12:30 P.M.	20	19	
	Orange *Osceola	Spencer A. Folsom, M.D. 319 Exchange Bldg. Orlando	C. D. Berry, M.D. 314 Exchange Bldg. Orlando	3rd Wednesday 8:30 P.M.	90	86	
	Seminole	C. L. Park, M.D. 515 1st Nat. Bank Bldg. Sanford	O. L. Barks, M.D. Sanford Clinic Sanford	2nd Monday 7:00 P.M.	13	100%	
	Volusia *Flagler	W. C. Pay, M.D. 221 W. Rich Ave. DeLand	R. L. Miller, M.D. 258½ S. Beach St. Daytona Beach	2nd Tuesday 7:30 P.M.	46	42	
C	Hillsborough	B. W. Lowry, M.D. 1019 Citizens Bldg. Tampa	James S. Grable, M.D. 811 Citizens Bldg. Tampa	1st Tuesday 8:00 P.M.	104	97	C-5-44 Leland F. Carlton, M.D. Tampa
	Manatee	L. W. Blake, M.D. Bradenton	M. M. Harrison, M.D. Professional Bldg. Bradenton	3rd Tuesday 7:00 P.M.	14	100%	
	Pasco-Hernando-Citrus	J. T. Bradshaw, M.D. San Antonio	G. R. Creekmore, M.D. Brooksville	2nd Thursday 7:00 P.M.	13	100%	
	Pinellas	W. C. McConnell, M.D. 313 First Federal Bldg. St. Petersburg	Annette M. Feaster, M.D 166 Fourth Ave. N. E. St. Petersburg	1st and 3rd Fridays 6:30 P.M.	106	100%	
	Sarasota	A. Lamar Matthews, M.D. Box 1868 Sarasota	Stanley T. Martin, M.D. 361 Main St. Sarasota	2nd Tuesday 8:30 P.M.	18	15	
	DeSoto-Hardee-Highlands-Charlotte-Glades	M. C. Kayton, M.D. Wauchula	C. H. Kirkpatrick, M.D. Box 454 Arcadia	2nd Tuesday 8:00 P.M.	20	100%	C-6-43 Edgar Watson, M.D. Lakeland
	Lee *Collier, Hendry	Harvie J. Stipe, M.D. 312 Pythian Bldg. Fort Myers	A. Louis Girardin, M.D. 309 Pythian Bldg. Fort Myers	3rd Tuesday 7:30 P.M.	17	100%	
	Polk	J. R. Boulware, M.D. Box 367 Lakeland	Edgar Watson, M.D. Box 1021 Lakeland	2nd Wednesday 1:00 P.M.	59	57	
D	Palm Beach	O. B. Hazen, M.D. Comeau Bldg. W. Palm Beach	D. W. Martin, M.D. 618 Comeau Bldg. W. Palm Beach	4th Monday 8:00 P.M.	69	68	D-7-43 William Y. Sayad, M.D. West Palm Beach
	St. Lucie-Okeechobee-Indian River-Martin	R. C. Boothe, M.D. Box 408 Ft. Pierce	Adrian M. Sample, M.D. Box 176 Ft. Pierce	3rd Thursday 8:00 P.M.	18	100%	
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[1]*Fauley, G. B.; Freeman, S.; Ivy, A. C.; Atkinson, A. J., and Wigodsky, H. S.: Aluminum Phosphate in the Therapy of Peptic Ulcer, Arch. Int. Med. 67: 563-578 (March) 1941.*

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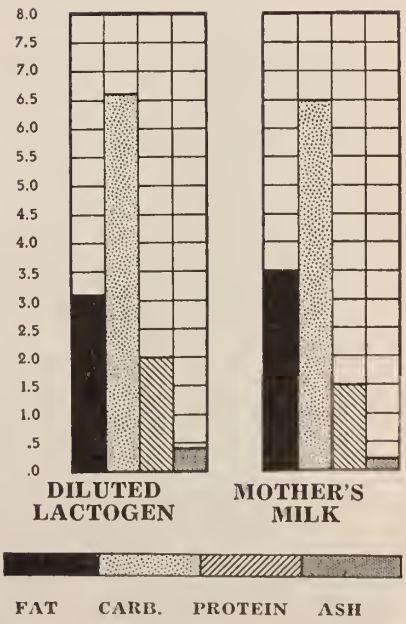
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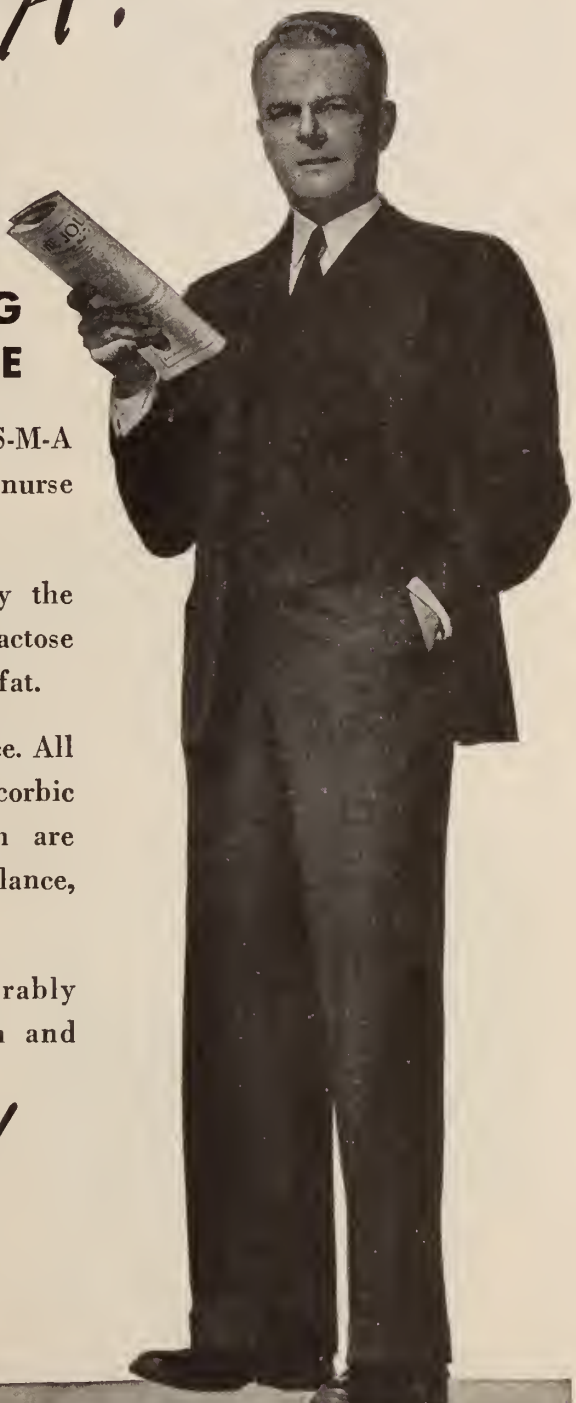


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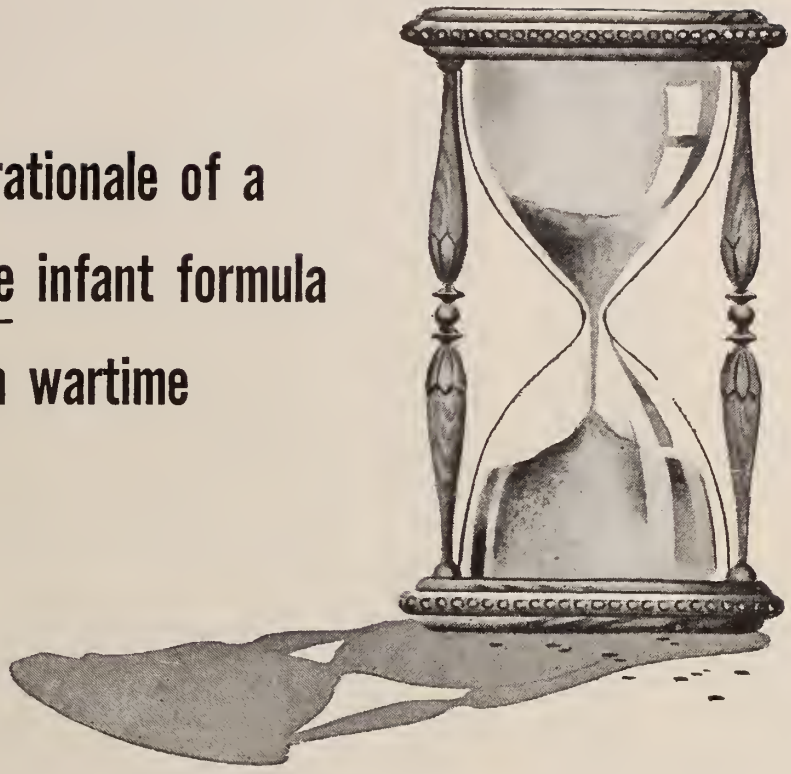
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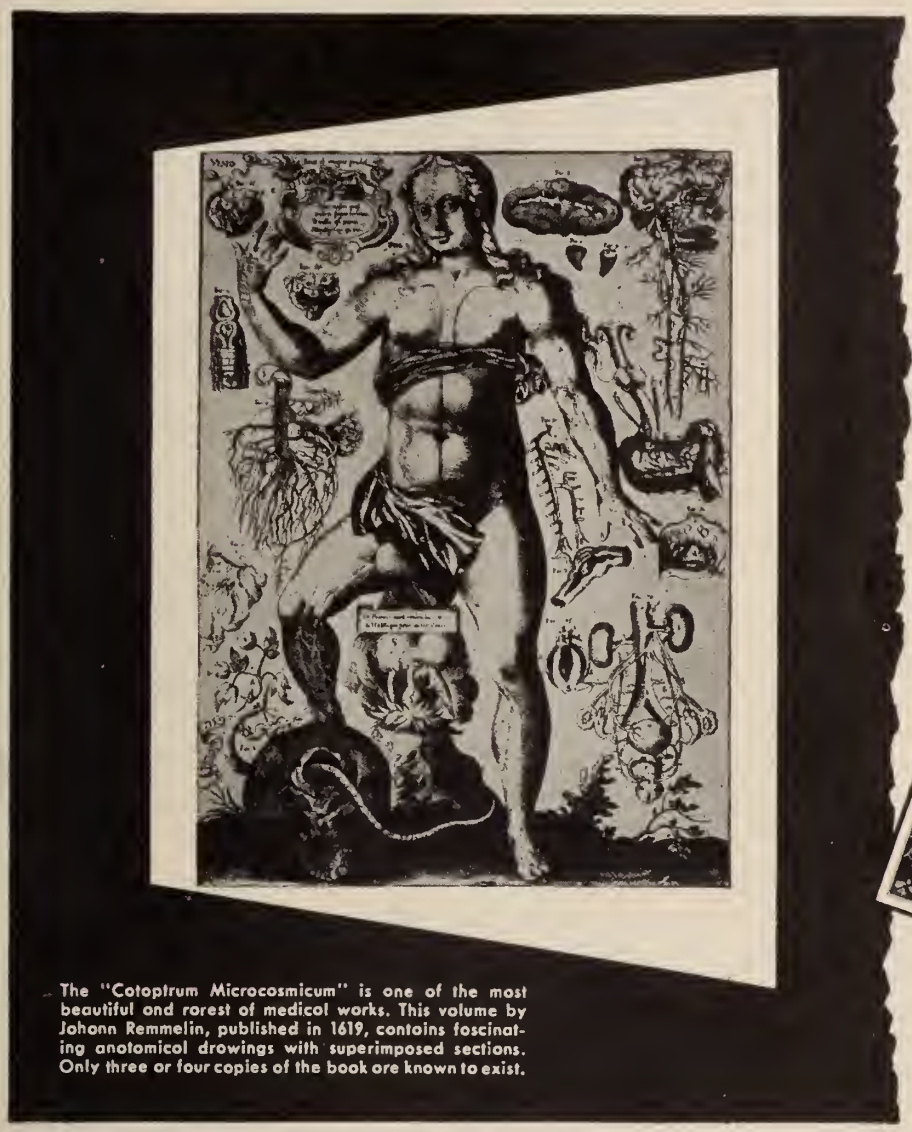
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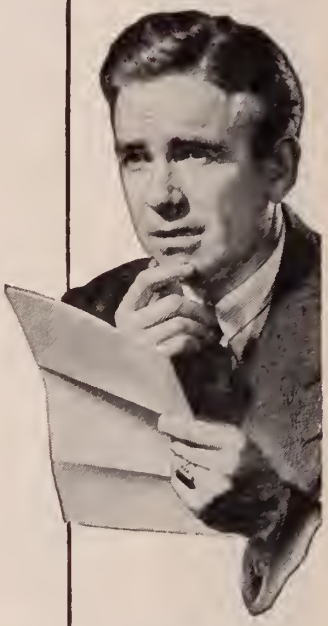
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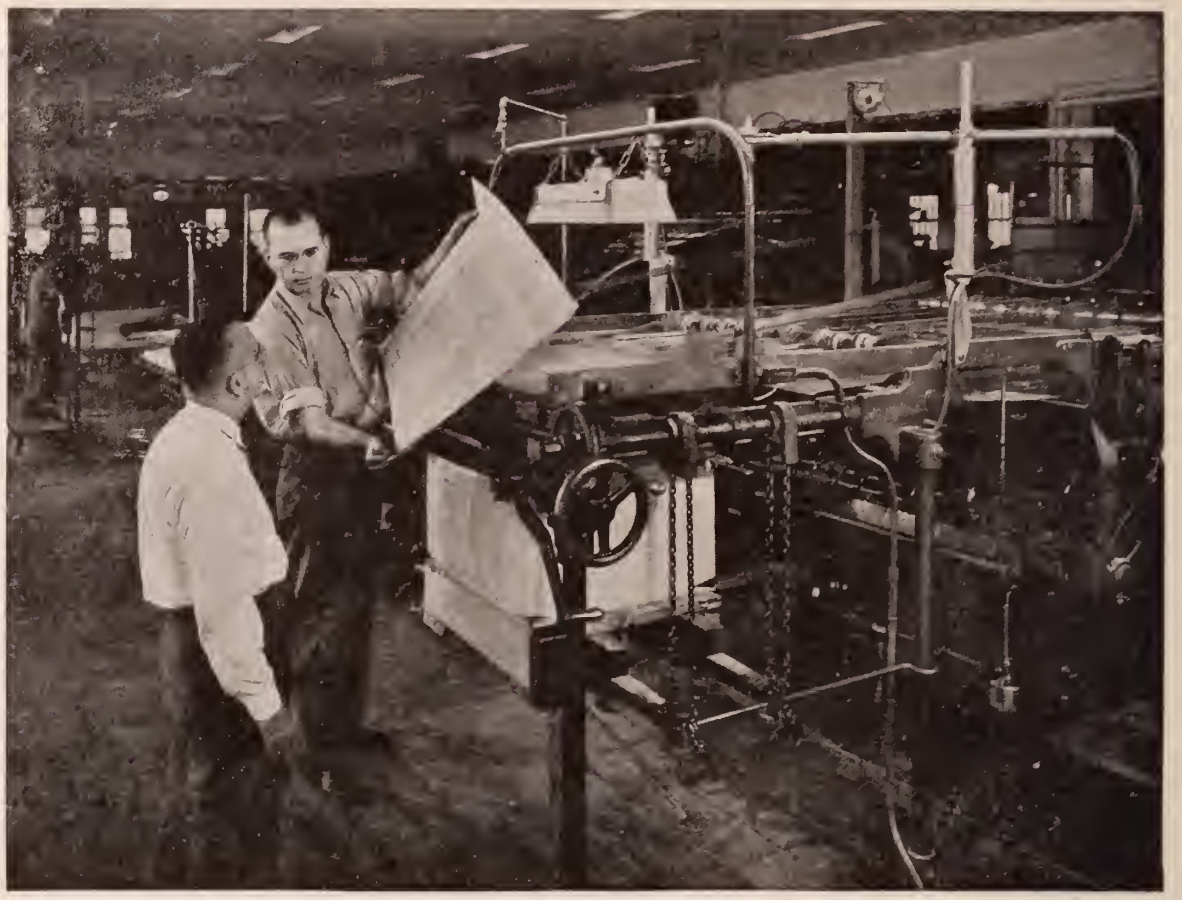


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SOME MEDICAL PROBLEMS OF FLIGHT

MAJOR NATHAN S. RUBIN, M. C.
PENSACOLA

Man, with the same imperfect physical equipment he employs under conditions of life on the earth's crust, has by use of the airplane entered among tremendous forces in the environment of the upper air. As pilot or air traveler, he has placed himself within an instrument capable of creating particular conditions of stress which have never before been experienced by the human organism and which can be injurious to it.

According to the *Civil Aeronautics Journal*, there were 564 aircraft and 2,500 registered non-military pilots in Florida on Jan. 1, 1942. The Civil Aeronautics Commission of the United States Department of Commerce reported that for the first eleven months of 1941, the seventeen scheduled air lines operating in continental United States carried three and three-quarter million passengers an average of 400 miles each. With mass production of airplanes and with the tremendously expanding pilot-training program of the military services, the certain outgrowth of the present war will be more civilian flying and air travel as cheap and matter-of-course as today's travel by train or automobile.

As the development of aviation progresses and as airplanes become more powerful, fly faster and fly higher, the medical profession must keep pace with the special medical problems which have arisen. This paper will be limited to consideration of the physiologic, potentially pathologic, effects on the gas-filled body cavities, the effects of tissue anoxia, and accelerations of the body in flight effects, which are problems of aviation medicine of moment also to physicians from whom air travelers will inquire how flying can affect them and why.

The physical elements influencing the human organism most during flight in the modern airplane are concerned with vibration, noise, ventilation, temperature and high altitude flying. Except for high altitude flying, the skill of technical engineering has brought these factors well within the zone of passenger comfort. But the physiologic and psychologic impairments resulting from ascent, descent and altitude continue as today's medical problems of aviation.

The human organism has developed mainly on the earth's crust and near to sea level. Yet generations of men have become adapted to life at altitudes of from 8,000 to 14,000 feet in the Peruvian Andes, the Alps and the Himalayas.[1, 2] Nevertheless, transporting the human body by airplane to similar altitudes, even for short periods of time and despite the capacity of the human body to adjust to sudden changes in the physical environment, is attended by pronounced effects on various organic functions caused directly or indirectly by changes in atmospheric (barometric) pressure and by acceleration.

The airplane is not an automobile, but a ship which navigates the atmosphere. At sea level the atmosphere is weighted down and compressed by the miles of air above it, but in the upper air, the component gases of the atmosphere, mainly nitrogen and oxygen, being relieved of the weight as the barometric pressure falls with increasing altitude, become increased in volume and thin. These external physical effects do not compress or distort the body, but the gas-filled cavities of the body, principally the nasal accessory sinuses, the middle ear and portions of the intestinal tract, become subject to an expanding force. In addition, thin air, lacking a sufficiency of available oxygen, may create tissue anoxia, while the rapid accelerations produced by the flight itself may cause disordered orientation. As a consequence, certain physiologic, potentially pathologic, disturbances occur, which will now be discussed.

First consideration is given to the nasal accessory sinuses, namely, the frontal, maxillary, anterior and posterior ethmoidal, and sphenoidal sinuses, in a group. They need no other histologic or anatomic description here than that they are essentially spaces in the skull lined by mucous membrane and containing atmospheric air. This air, like gases anywhere, is governed by the same physical laws and expands with the decrease in barometric pressure which occurs with ascent (fig. 1). Except that the sinuses communicate with the nasal cavity through natural openings, they may be considered as inelastic spaces now become subject to pressure. This pressure[3] can

Wing Surgeon, 51st Troop Carrier Wing.
Read before the Sixty-Ninth Annual Meeting of the Florida Medical Association, held in Hollywood, April 13, 14 and 15, 1942.

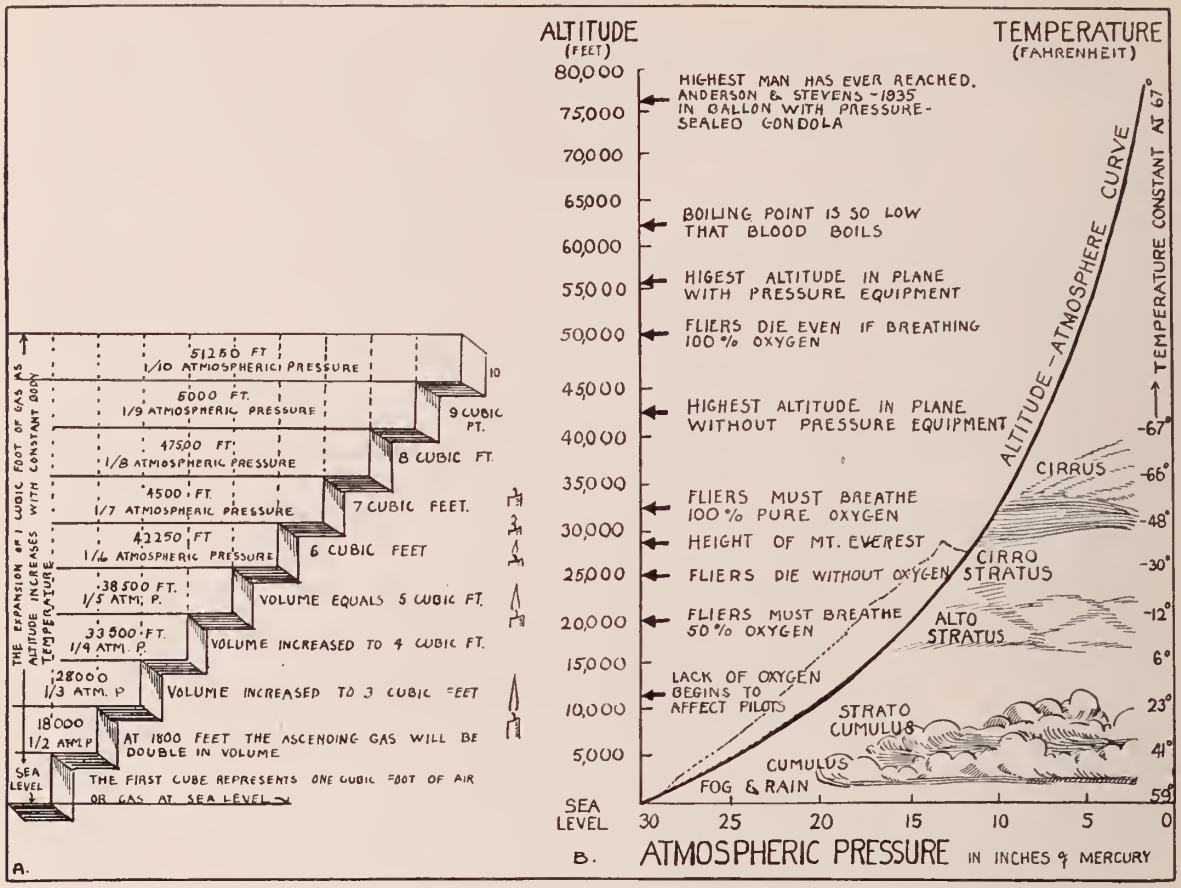


Fig. 1. A. The expansion of one cubic foot of oir ot vorious levels. B. The foll of otmospheric pressure with increosing oltitude.

be reduced to 3 pounds (1.3 Kg.) per square inch as at an altitude of 38,000 feet, or increased to 240 pounds (109 Kg.) per square inch as at 500 feet under water, without demonstrable physiologic effects provided equalization of pressure can occur freely in these air spaces of the skull. But if these air spaces are occluded or their openings obstructed, variations of even 1 or 2 pounds (0.5 or 1 Kg.) of pressure, when occurring with rapid altitudinal changes, will elicit a severe pain over and outlining the involved sinus area, and be accompanied by congestion, edema and hemorrhage in the affected tissues.

When sinus disease with exudate, purulent or otherwise, already exists, the disease will become aggravated. This exudate, as the atmospheric pressure outside the sinus becomes less than that inside it, as occurs in ascent, is forced outward and will escape from the sinus or will lie over the sinus opening. With descent, the pressure becomes negative. A cupping action occurs in the sinus, and the bacteria-containing fluid is forced back into it. In this way, further burden and insult are added to the already vulnerable and congested sinus mucosa.

Simularly, when the opening of the sinus is obstructed by swollen tissues or by polyps, these changes may completely obstruct the opening. In ascent, air in the sinus will flow outward, and no symptoms will occur until descent. Then, the negative pressure may suck the redundant tissue into the sinus opening to close it completely, and as the pressure inside the cavity decreases, equilibrium becomes established by drawing blood and serum from the sinus mucosa.[4] Consequently, when altitudinal changes are rapid, with accompanying differential pressures, the swelling of tissue and production of fluid may become enough to give severe pain and the picture of acute sinus disease. Obviously, persons with nasal disease, head colds, polyps or other forms of nasal obstructions, should not fly or travel by air unless these conditions are alleviated before flight. Since conditions of atmosphere vary to greater degree near sea level, all these effects become especially prominent and distracting when a plane approaches land, and a pilot needs all his faculties for a safe landing.

Of all the organs that suffer because of man's flying, the ear, particularly the middle ear, is

one of the most susceptible. The middle ear presents a problem in flight somewhat similar to that of the sinuses and is the origin of the difficulty most frequently experienced occupationally by aviators, and by air passengers. The middle ear, too, except for the tympanic membrane, is essentially an inelastic air-filled space. From it the air regularly escapes, or is replenished by way of the eustachian tube during swallowing, yawning and similar physiologic acts. Since the deleterious effects of air travel occur largely because of the structure and function of this same eustachian tube, a brief anatomic review is presented.

The eustachian tube or canal, a slitlike potential tube extending from the middle ear to the nasopharynx, is formed of bone, cartilage and fibrous tissue, and has a lining of ciliated mucous membrane. Its functions are to drain and to ventilate the middle ear. During ascent to high altitude, the expanding air in the cavity of the middle ear, acting like all gases under pressure when the pressure is lessened, forces open the eustachian tube and passes through it into the nasopharynx and outside air, thereby relieving pressure within the middle ear. This change occurs in a series of spurts; the developing pressure in the middle ear does not force the air out through the eustachian tube at the onset, but becomes perceptible as an annoying feeling of fulness which also affects hearing by imparting a distant sound and a decreased intensity. There is also an increasing bulging of the drum. This continues during 500 feet of ascent by which time, in normal cases, an excess pressure (approximately 15 millimeters of mercury) has been created, which is sufficient to force air out through the eustachian tube, thereby relieving the pressure in the tympanic cavity and the accompanying symptoms, while the drum membrane snaps back into normal position. This procedure is repeated during each 500 feet of ascent and each time is accompanied by a feeling of fulness as the pressure builds up, and by a click as the pressure is relieved and the drum snaps back into place.

Beyond this annoyance, a climbing airplane causes no difficulty in the middle ear unless there is partial or total stenosis of the tube. Then the pressure required to force it open will be increased and will vary with the degree of stenosis. The tension becomes relieved only over a period of time instead of instantly, or a residual pressure may continue in the middle ear after the tube has closed. If the tube cannot be opened at all and ventilation of the middle ear is not accomplished, pressure within the middle ear will continue to rise, and the drum will continue to bulge and be traumatized. Such insults repeated may produce a permanent conduction type unilateral or bilateral deafness. A pressure of 15 to 30 millimeters of mercury will increase the discomfort and is accompanied by mild tinnitus, vertigo and pain. Pressure in the middle ear above 30 millimeters of mercury will cause increasing pain, tinnitus, and vertigo that will finally become unendurable unless the eustachian tube can be opened voluntarily, an effort normally required only in descent.

In descent of an airplane, the atmospheric pressure increases, and the gas pressure in the middle ear becomes negative. Nevertheless, except that the drum membrane becomes sucked in instead of bulging, the symptoms are like those already named. Further, the pressure cannot be relieved mechanically through its own force acting on the eustachian tube because the valvelike action occurs only one way, from the middle ear to the nasopharynx. Only voluntary contraction of the tube's dilator muscle permits air to enter the middle ear and prevents formation of a vacuum. This is accomplished by a descent not faster than a thousand feet per minute, by swallowing or yawning, by singing or shouting, by tensing the muscles of the neck, by chewing gum or sipping fluids, or by closing the mouth and pinching the nose shut while blowing through it, thereby forcing air into the middle ear. There is, normally, no difficulty in accomplishing this unless the negative pressure in the middle ear has been allowed to build up and the ear is thus caused to become trapped. This pressure cannot then be relieved by muscular action, but only by a return to the original higher altitude, to be followed by conscious ventilation of the middle ear every thousand feet during a slow descent.

It is repeated that there is no difficulty normally. No matter whether the pressure in the middle ear is positive or negative, mechanical or voluntary opening of the eustachian tube will immediately relieve all acute symptoms unless there is partial or total stenosis of the tube. Then again comes trouble for it is during descent in aircraft that the greater difficulty and the highest pres-

sure differentials occur. When a negative pressure of 60 millimeters of mercury occurs, the pain is severe as in acute otitis media, the tinnitus becomes great and nausea and vertigo are present; at 80 millimeters of negative pressure, the pain is most severe and radiates to the jaw and cheek; when pressures go even higher, the pain becomes agonizing and deafness is pronounced, finally leading to nausea and vertigo, collapse and shock, and extensive linear rupture of the tympanic membrane with hemorrhage.

From consequences such as these, it is evident that those with partial or total, temporary or permanent, stenosis of the eustachian tube should be warned against flying except under controlled conditions of gradual changes of altitude and not higher than 2,000 feet. Narrowing of this tube is not a textbook rarity. It is seen among those who, as a consequence of an adenoidectomy that went too far afield, have scar tissue about the pharyngeal opening of the eustachian tube. Persons with edentulous mouths or poorly fitting dentures, those with overbite of considerable degree of malocclusion and those with molar teeth worn or lacking all also have a crowding or compression stenosis of the eustachian tube.[5] Stenosis of the eustachian tube of varying degree happens also with coryza, sinusitis, tonsillitis or pharyngitis, nasal obstruction and inflammatory conditions of the eustachian tube and middle ear. Unless stenosis of this tube of any degree is alleviated, flying should be considered a potential source of irritation, and even of permanent damage, to the ear.

Gases in the stomach and intestinal tract, usually residual nitrogen of swallowed air, mixed with gases of fermentation, also obey physical laws and expand with the decrease in atmospheric pressure which occurs with ascent. At high altitude, pilot and passenger alike may have excessive bloating and abdominal distention only partially relieved by the passage of flatus. The expansion of these gases may lead to abdominal discomfort and colic, to pressure on the diaphragm and to interference with breathing and digestion. Those who fly or travel by air do well before flight to avoid gas-producing foods like beans, cabbage and cauliflower, as well as coarse vegetables bulky in cellulose, highly spiced or greasy foods, beer, carbonated drinks, tea or coffee in excess, sweets and alcoholic liquors. All constricting clothing should be loosened; women should take off girdles. Similar considerations also apply to high altitude travel or transport by air of patients with intestinal perforation, with recent abdominal wounds, with peptic ulcer, with strangulated hernia, or with intestinal obstruction.

A most significant and dangerous disturbance that occurs in flight is the physiologic and psychologic impairment that results from the lack at high altitude of available oxygen for the subsistence of the human organism. The function of breathing is to obtain supplies of oxygen for the tissues and to get rid of carbon dioxide. In contrast to provision for reserves of other chemicals that maintain life, such as carbohydrates and calcium, there is no storage of oxygen in the body, except limitedly in the lungs and blood stream where it is expended every forty seconds. Hence, the human economy leads a hand-to-mouth existence as regards its oxygen needs and is dependent on a constant supply from the atmosphere.

The air near the earth consists almost entirely of nitrogen (78 per cent) and oxygen (20.93 per cent) with traces of carbon dioxide (0.04 per cent) and about 1 per cent of the inert gases, argon, neon, krypton and helium, besides a variable amount of water vapor. So far as its gaseous constituents are concerned, the composition of the atmosphere remains almost unaltered up to a height of 38,000 feet. But in ascent above the earth's surface, the pressure of the atmosphere falls so that at any given altitude a given volume of gas increases in volume in relation to the fall of the barometer, and the concentration of gases is reduced (fig. 1). Specifically, at 18,000 feet the total atmospheric pressure and the partial pressure of oxygen are reduced one half while the mass of gas occupies nearly twice the volume it would occupy at sea level, so that a given breath of air at that level would supply only half as much oxygen. As the partial pressure of atmospheric oxygen falls, there is a consequent fall of oxygen pressure in the alveoli of the lungs. Then follows a decrease in the oxygen saturation of the arterial blood together with the development of anoxemia and, finally, of tissue anoxia, which in aviation causes altitude sickness.

Airmen continually exposed to flights at high altitudes build up an increased tolerance to oxygen lack and adjust more readily to the conditions of flight. Nevertheless, during long flights even at 10,000 feet, physical inefficiency, the

commitment of costly errors of judgment and the development of excessive fatigue are apt to occur. The average unacclimatized air traveler[6] conditioned by his physical well-being, or lack of it, by the number of hours of sleep or degree of fatigue previous to flight, and by his emotional adaptation and freedom from worry, also becomes subject to such physical impairments. Some become affected at 8,000 feet, others at 16,000 feet while the average is between. Effects become pronounced at 14,000 to 16,000 feet, and dangerous at 18,000 to 20,000 feet. At 20,000 feet unconsciousness may occur within a few minutes or an hour, at 25,000 feet within thirty seconds to fifteen minutes, at 30,000 feet from thirty seconds to one and one-half minutes, at 35,000 feet from twenty-five to fifty seconds, and at 40,000 feet within fifteen to twenty-five seconds. When the altitude is attained gradually, acclimatization is easier, and the effects may be less serious.

Acute altitude sickness has an insidious onset which, in many, may lead to unconsciousness, with warning symptoms often completely unobserved subjectively. These warnings are frontal headache increasing with altitude, vertigo on moving suddenly or bending over, shortness of breath or irregularity in breathing, alterations in field of vision with greatly reduced ability to see in low illumination and a tendency to lethargy and exhaustion. Objective findings are like those in tissue anoxia from any cause; pulmonary ventilation is increased, and breathing becomes deeper until at 25,000 feet respiratory failure owing to anoxia causes death after twenty to thirty minutes of exposure. The cardiovascular response at first is an increase in cardiac rate, blood pressure and cardiac output, along with an increase in the amount of hemoglobin in the circulation. When anoxia occurs, though there is an absence of physical exertion, the added effects of centrifugal force cause profound changes in distribution of the blood and increase the burden of the heart to maintain adequate circulation. Forty-seven per cent faint as a consequence of circulatory collapse, while the other 53 per cent exhibit failure first of the higher psychic centers.[7] It is interesting that there is a tendency for less extreme rises in pulse rate and less susceptibility to sudden collapse or fainting in older persons, indicating that the circulatory mechanism of adaptation has become more stabilized or less flexible with increasing age.

Psychologic changes, as a consequence of anoxia in those cortical elements of the brain centering the more complex mental functions, closely follow these physiologic alterations. When anoxia is mild, these changes resemble those of mild alcoholic intoxication; an early false sense of well-being, a feeling of exhilaration followed by lethargy and sleepiness, impaired reasoning and judgment, slowed reaction time, greater difficulty in concentrating, attending and thinking clearly, an increased lack of insight which does not permit the flyer to recognize his predicament and his own deficiencies. There is a striking increase in the amount of effort of mind required to accomplish usual tasks, and when such tasks are accomplished they are attended by great fatigue. Profound psychologic effects occur between 20,000 feet and the point at which unconsciousness happens. Deterioration occurs rapidly. There are restriction of activity with loss of neuromuscular control, tremors of the hands and general clumsiness, and there may be twitching, rhythmic movements, or even paralysis.[8] Awareness of the lapse of time is lost together with volitional control, except for a great persistence in attempting to carry out an assignment. Explosive emotional outbursts, increased irritability or loss of temper and self control, or laughter without cause, occur to evidence alterations in temperament or emotional stability. Anoxia beyond this degree brings unconsciousness, and death, if exposure is long enough. Supplementary oxygen should be used at all altitudes over 15,000 feet and in all flights over 10,000 feet if the flight is prolonged. In flights in which preservation of night vision is paramount, oxygen should be breathed from the moment of the take-off.[9]

Air travelers with pronounced respiratory or cardiac defects are especially susceptible to these effects. It has been said that the average cardiac patient who can walk can also fly, but the altitude should be restricted so as to avoid any serious effects during or after flight. Patients with disease of the heart who have little cardiac reserve should avoid air travel except in extreme emergency.

Airsickness, not to be confused with altitude sickness, is an effect of rapid accelerations of the body, both linear vertical motions and rotary motions, in aircraft flight. It is characterized by nausea, even vomiting, instinctive fear, pallor,

sweating, vertigo and prostration. Its etiology is still a matter of argument, but evidence suggests it may be a special type of vertigo, induced by physiologic and psychologic mechanisms, that occurs when conflicting sensory impressions from two or more of the organs of equilibrium reach consciousness. As long as the pilot or the air passenger is able to have a visual reference to the terrain below, he will not suffer from vertigo due to accelerations. When the airplane banks, turns, noses up or down, or makes sudden changes in vertical position due to bumpy air, the semicircular canals and otolithic apparatus transmit the changing position in space. As long as flying is close to the ground in good visibility, the visual mechanism records similar changes of the position in space with reference to the ground. When, however, the pilot is flying blind as in dense clouds, or when the passenger similarly cannot, or makes no attempt to, keep oriented by fixing the gaze on definite objects on the ground, the only visual reference is the inside of the plane itself. Since the body has moved with the plane, the eyes record no changes in the position in space, inasmuch as the inside of the plane has not changed position at all in relation to the body as far as can be seen. Hence the two sets of data do not coincide, and vertigo due to a disordered orientation soon arises. When this happens, it can almost immediately be overcome if visual reference to the ground is made for even a brief moment, so that the person's visual and labyrinthine stimuli can agree. The vertigo and chain of symptoms which arise are unpleasant, but to the pilot they are not only unpleasant but dangerous, unless he has been taught to watch his instruments and to ignore the sensations arising from the labyrinth.

This has been a hedge-hopping survey of the subject, and much has been untouched and unsaid. Nevertheless, it may arouse some degree of awareness of the problems of aviation medicine. Man, when he put on wings and attempted to penetrate a region in which he is poorly fitted to survive, looked to medicine to solve the difficulties.

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DISCUSSION

COMMANDER GUY FISH, Miami: I will try to emphasize a few points in connection with this timely and interesting paper. One point the Major did not bring out is that nonsymptomatic cavities of the teeth are often first detected due to the expansion of the gas within the cavity. Concerning the sinuses, with descent, the pressure becomes negative. A cupping action in the sinus presses fluid filled with bacteria back into the sinus and is blamed for accidents at the present time. It seems more logical to me that air will get into a cavity more readily than will fluid.

I think that one point was omitted. Chewing gum to equalize pressure in the middle ear was mentioned. That would only be practicable on short infrequent flights, and also it could not be practiced while wearing a mask. I don't own any Wrigley stock; so I am against the practice of chewing gum. So much air is swallowed while chewing gum that it is impracticable from a military standpoint when long flights are required.

There is one point which is often brought up, that passengers returning from night flights above 9,000 feet often complain of retardation and reduction of light adaptation. They are not noticed around 5,000 feet and on return to the ground. Below 9,000 feet there is very little trouble. This difficulty may be the result of decrease in oxygen above that level.

An early objective symptom of airsickness and one readily seen is cyanosis of the nasal beds.

Another point which I think should be brought out is that there is impairment of hearing while a person is flying. This may be the cause of pilots not being able to follow the beam. They depend upon the beam a great deal, and it has often been thought that in a few cases disastrous results may have been due to the fact that there was a lack or loss of hearing and that the pilots were unable to hear and follow the beam.

Another interesting little sidelight is air embolism. Air embolism may occur in flight above 25,000 feet. One will get symptoms similar to those occurring in caisson disease, such as headache, pain in joints, arms and legs, and disturbance of vision. These usually clear up when the men return to the ground and are only a matter of interest because instructors or pilots may ask questions as to why they had these pains at that particular height.

I have observed many persons coming in complaining of pain in the ears. I should like to mention just a few things not covered by the Major. His is a hard paper to discuss because it is mostly facts that he presented. Patients will come in complaining of pain in the ear. The external canal has something to do with that complaint for I have observed in many cases that wax has accumulated and become firm and that it may be forced up against the drum. In some cases this wax, on becoming free for some reason and being mixed with water, sets up irritation and a chronic eczematous condition of the external canal with a very red membrane and considerable pain. If there is no wax in the external canal, then pain is usually caused by an accumulation of serum in the middle ear causing definite redness and evidence of inflammation.

One more point Dr. Jones asked me about this morning. A friend of his wrote him that during calisthenics he found after turning slowing and then changing his

position that dizziness developed. This is noticed frequently during exercise. It is due to the fact that when turning slowly over a period of time the fluid in the semicircular canal is set in motion. On changing position of the semicircular canal or on stopping movement there will be a sense of dizziness. This is overcome in ballet dancing by a quick snap of the head on turning. This is a point well worth remembering, and one that is easily explained to patients.

Dr. M. A. Lischkoff, Pensacola: Major Rubin has demonstrated the 1942 model to which I can add nothing; but, being a pioneer in aviation medicine, I might be able to tell you something about the 1917 model from which some of these facts have evolved.

Before this country entered the war with Germany in 1917, a group of otologists were invited to the office of the Surgeon General in Washington to discuss the problem of the flier, who was destined to play an important role. We were told the German aviation force had a separate medical group investigating its special problems and that this group had done much to distinguish those who have special physical qualifications for flying. At the conference special stress was put on the labyrinth; vertigo and nystagmus were of prime importance.

Up to that time the flyer was not selected because of his peculiar fitness for flying; it was simply a question of whether he "had the nerve." At one time circumstances made it necessary to place men in the aviation service who were all worn out by the more trying work of the infantry or field artillery. The viewpoint at that time was: "This man is no longer fit for ground fighting; therefore, he will do for the air service." This led to the belief that the flyer must be a superman.

The aviator took a special examination. He was turned in a Bárány chair. Occasionally the ears were douched with cold water to register nystagmus or vertigo. Depth perception was recorded, and an attempt at reproducing conditions of altitude was made, such as tank examinations when the oxygen was slowly withdrawn and the temperature reduced. The first instrument of value developed for this special examination was the Ruggles orientator.

Many of the pioneers deserve a great deal of credit, and they include such men as Jones, Fisher, Wilmer, Lyman, Lancaster and others. Today there is the same problem of selecting men, but the plane they pilot is a 1942 model capable of doing things of which we hardly dared to dream.

Dr. Rubin (concluding): I have had two special privileges here, the first in being permitted to present the paper, and the second in having had it discussed by Commander Fish. Many may not be aware of the fact that a Commander in the Navy is equivalent to a Lieutenant Colonel in the Army. To me, it is a noteworthy distinction to have a senior officer discuss this paper.

In regard to some of the remarks made, all of which were pertinent, I should like to say that I could not cover the whole subject because of lack of time. I had to leave out air embolism and other phases, such as the neuropsychiatric aspects and fatigue. Indeed, it was only through the kind indulgence of the chairman, Dr. White, that I could cover as much of the subject as I did.

When I prepared this paper, I had expected to be out of the military service and to appear as a civilian, considering the subject from the civilian rather than the military viewpoint.

Those whose practice deals with the ear, nose and throat know particularly that it is hard to swallow on command, or when the act is a conscious one. It is often necessary to give a patient water to sip in order to get him to swallow at the precise point of an ear inflation. So my associates and I tell the air traveler to chew gum. We feel that may prevent consequences in the ear more serious than those that may happen in the intestinal tract as a result of swallowing air.

I want also to thank Dr. Lischkoff for his contribution and glance into the early years of aviation medicine. I think that all should be grateful that aviation medicine has advanced just as the modern airplane has advanced over the crates that were used in his day.

Thank you very much.

SHOCK

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Since shock plays such a large role in war time medicine, a careful review of the recent literature on the subject is apropos at this time. Failure of the circulation may result either from a weakness of the heart itself or from an insufficiency of the circulating blood volume. The former is called myocardial insufficiency or congestive failure, and the latter, peripheral circulatory failure.

Whenever the blood flow to the tissues becomes inadequate in the presence of a heart capable of sustaining a normal blood flow, peripheral circulatory failure is present. Most observers classify peripheral circulatory failure into two types, depending upon the rapidity of its development and the length of time it lasts. Stead[1] and others have suggested the term "primary shock" or "collapse" for the sudden and short-lived peripheral circulatory failure, and "shock" or "secondary shock" for the more prolonged failure. While the two conditions may overlap, it is with the latter condition that this paper is concerned.

Blalock[2a] classified shock as (1) hematogenic, due to actual loss of fluid from the vascular system; (2) neurogenic, due to dilatation of the blood vessels; and (3) vasogenic, due to actual injury of the capillaries and vessels. Freeman,[3] on the other hand, defined shock not as a clinical condition but as "a process characterized by progressive loss of circulatory blood volume brought about by tissue anoxia resulting from inadequate circulation." Harkins[4] defined it as "a progressive vaso-constrictive olegemic anoxia."

The syndrome of shock is characterized clinically by reactions of depression (sometimes with apathy and other times with anxiety), pallor, occasional cyanosis, feeble rapid low volume pulse, faint cardiac tones often with gallop rhythm, cold clammy skin, subnormal temperature, shallow and rapid respirations often interspersed with sighing, thirst, vomiting, bluish red

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mottling of the skin, diminished reflexes, dilated and sluggish pupils, scanty urine with low specific gravity or even anuria, elevation of the nonprotein nitrogen of the blood, acidosis, hyperglycemia and a progressively declining blood pressure. The face is ashen in color, anxious in expression, with eyes sunken and surrounded by bluish rings, the typical hippocratic facies. All these signs or any combination of them may be present, depending upon the severity of the shock.

The picture of shock must not be confused with the picture of circulatory failure of cardiac origin, since the treatment is in many instances diametrically opposed. Cardiac failure is characterized by venous congestion, pulmonary edema, peripheral edema, dyspnea or orthopnea, hepatic congestion and cardiac hypertrophy. None of these conditions is present in the state of shock. Digitalis has an important place in the treatment of cardiac failure, but is harmful in the treatment of shock and should not be used.

Until a few years ago shock was recognized only by the surgeons as an effect of accidental or surgical trauma, but today it is known that it may be produced in a great many other ways. Some of the well known conditions that may produce this syndrome[4,5,6,7] are:

1. Accidental or surgical trauma.
2. External or internal hemorrhage; the latter may be produced by erosion of blood vessels in such diseases as peptic ulcer, aneurysm, varicosity and tuberculosis, resulting in the accumulation of blood in the tissues and body cavities.
3. Acidosis, associated with diabetic coma and other conditions.
4. Addison's disease.
5. Severe burns, produced by the sun or other physical agent.
6. Severe cold.
7. Irradiation sickness.
8. Serum sickness.
9. Profound anemia.
10. Heat stroke.
11. Capillary poisons, such as histamine, peptone and anaphylactic agents.
12. Severe sepsis, as in generalized peritonitis, acute pancreatitis, cholera, pneumonia, influenza and typhoid.
13. Dehydration, from vomiting, diarrhea and other causes.
14. Poisoning, caused by barbiturates, arsenic, mercury, war gases, gold chloride, carbon monoxide, oxalic acid and snake venom.
15. Vascular occlusive conditions, such as coronary thrombosis, pulmonary embolism and embolism of other larger arteries.
16. Trauma without hemorrhage or ruptured tissues, such as may be caused by severe blows to the abdomen or testicle.
17. Hyperventilation.
18. Spinal anesthesia.
19. Allergic crises.
20. Pain, emotional stress, exposure to cold, physical and nervous fatigue may all be contributory factors.

All the enumerated causes of the syndrome of shock have one common factor, a discrepancy between the blood volume and the capacity of the vascular system. It may be produced by a decrease in the circulating blood volume or by an increase in the vascular capacity,[8a, c] or both. This discrepancy is recognized as the essential feature of shock. The easiest to understand is the decrease in blood volume caused by the loss of blood, or by dehydration resulting from excessive sweating, polyuria, vomiting, or diarrhea. Decreased blood volume is produced by the loss of plasma as a result of burns, pulmonary edema, peritonitis and trauma with tissue infiltration, and by generalized loss of plasma due to capillary damage, an extremely important factor in shock. Discrepancy may also be caused by an increase in the vascular capacity due to the sudden loss of vasomotor tone. This phenomenon occurs in association with fainting, spinal anesthesia, and widespread capillary dilation and injury from bacterial toxins or histamine.

The most important cause of the discrepancy is the increased vascular capacity which follows capillary endothelial damage. Moon[8a] claimed this to be the explanation of shock. Under the influence of various noxae the capillaries dilate, lose their permeability and become congested with blood. Thus a portion of blood is drawn out of circulation as a sponge absorbs water. The degree of shock is in direct proportion to the amount of blood segregated in the capillaries.

Whether the blood volume is reduced by loss of blood, by dehydration, by loss of plasma, or by withdrawal of the blood from circulation, the results are essentially the same and consist of decreased circulating volume of blood leading to reduced volume flow, tissue anoxia and widespread capillary injury. While hemorrhage may

lead to shock and give similar clinical findings, this condition has a different pathologic physiology and should be considered as a separate entity in order properly to understand shock. The mechanism of shock is well summarized by Moon[8b] as follows:

> Endothelium is delicately sensitive to lack of oxygen, to metabolic products, cytoplasmic substance, bacterial toxins and to a wide variety of chemicals and drugs. When affected by any such substances, the endothelium becomes relaxed, atonic and abnormally permeable to blood plasma. The sequestration of blood in dilated capillaries reduces the effective blood volume, and the leakage of plasma into tissue spaces lowers the total blood volume. This creates a disparity between the volume of blood and the volume-capacity of the vascular stream bed. This disparity, if not compensated, causes circulatory deficiency.
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> Compensation is accomplished through responses activated probably by impulses from the carotid sinus. Activity of the sympathoadrenal system causes constriction of peripheral arteries, the discharge of reservoir blood from the spleen into the systemic circulation and stimulation of the heart by the adrenal medullary hormone. So long as the mechanism of compensation is effective there is no marked decline in the blood pressure but the latter is maintained at the expense of volume flow which is reduced markedly. This stage of shock can be recognized by the presence of hemoconcentration. A progressive decline in the blood pressure signifies that compensation is failing and that the end is near. It is a sign of departed opportunity.
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> Capillary atony in extensive areas reduces both the total and the effective blood volume and leads to the reduction of the volume flow. This reduces the delivery of oxygen to the tissues. When the supply of oxygen falls below physiologic limits, it augments the capillary atony. Moderate lack of oxygen causes dilatation and hyperpermeability of capillary walls. This effect introduces a self-perpetuating quality which operates as a vicious circle and leads to irreversible changes.

Thus it is apparent that the capillary endothelium is a most vulnerable point, and its injury may initiate or perpetuate the mechanism which results in shock. While studies of the blood pressure may be important after shock has been recognized, it is worth emphasizing that there may be "compensated shock" with the blood pressure maintained by vasoconstriction, even though hemoconcentration exists.[9] At this stage treatment is most effective, and if the condition is unrecognized, it may proceed to the dangerous stage. Strumia, Wagner and Monaghan[10] stated that the need for large doses of plasma could be avoided by the use of smaller amounts earlier.

The pathologic physiology[8c] of shock is reduced total blood volume, volume flow, basal metabolism, oxygen content, carbon dioxide combining power, chlorides and coagulability of the blood with increased red cells, hemoglobin, specific gravity, nonprotein nitrogen, and sugar and potassium content of the blood. In the early stages the flow of lymph is increased; later it may subside. The absorption of water, drugs and other substances from the gastrointestinal tract and from subcutaneous areas progressively declines. In the final stages an unremittingly low blood pressure is present.

Shock should be prevented as much as possible, and the avoidance of dehydration is an especially important factor.[2b] It has been estimated that the total amount of the secretion into the intestinal tract of an adult is about 8 liters in twenty-four hours. When it is realized that most of this secretion can be lost by vomiting and diarrhea and that the total volume of blood plasma is less than 4 liters, the importance of replacement therapy is evident.

Shock can be recognized before the fall of the blood pressure by laboratory aid. Scudder[11] pointed out that four determinations are necessary to the proper evaluation of the early stages of shock, the hematocrit reading, the plasma protein level, and the specific gravity of whole blood and of plasma. Giordano[12] advised three tests, complete blood count, the hematocrit determination and the plasma protein level. The hematocrit determination establishes the ratio of red blood cells to plasma. In hemoconcentration which accompanies shock the average normal cell volume of 46 for men and 41 for women is increased proportionately with the degree of hemoconcentration.

At this point it is well to quote further from the statement by Moon[8e] about hemoconcentration: "It seems remarkable that a phenomenon so frequent in occurrence and so gravely significant as is hemoconcentration has not been understood and utilized in their clinical studies." Hemoconcentration can be detected by an increase in erythrocyte volume shown by the hematocrit reading, by increased specific gravity of whole blood, by increased hemoglobin content and by increased erythrocyte count. An increase in any of these indicates hemoconcentration, but the degree cannot be estimated except by comparison with previous data.

The level of plasma protein is of value as a check on the hematocrit reading and furnishes evidence of either protein loss or hemoconcentration. The average normal level of the plasma protein is from 6 to 8 per cent.

While there are many factors concerning shock about which all are not in accord, it is agreed that the factors which call for treatment are the

anoxia and the decrease in the blood volume. Treatment should be directed at the removal or amelioration of the cause, and the restoration of the blood volume to normal. The chief need is the restoration of the fluid lost. Treatment therefore depends on the type of fluid lost. There are three broad groups:[1, 9] (A) shock due to dehydration in which the principle need is water and salt; (B) shock due to hemorrhage, in which blood is needed, and (C) shock due to plasma loss, for which human plasma is the best treatment. Shock caused by dehydration is characterized by severe loss of water and electrolytes. The changes in the blood are indicated by an elevation of the hematocrit reading and the plasma protein level, and usually by a fall in serum electrolytes. Shock due to hemorrhage is characterized by a fall in the hematocrit reading and a normal to low serum protein level. The third form, shock due to loss of plasma, is characterized by elevation of the hematocrit reading with a slight change in the plasma protein level. A normal plasma protein accompanied by hemoconcentration is indicative of loss of protein; therefore, plasma is the chief need. In essence, in shock of any type, an attempt must be made to keep the hematocrit determination and plasma protein level within normal limits by as frequent tests as circumstances warrant; they should be made every four hours in cases in which the patient is seriously ill.

It should be emphasized that plasma loss may be present in any type of shock and, therefore, that plasma replacement is indicated whenever it becomes necessary as shown by an increase in the hematocrit determination out of proportion to the rise in the plasma protein level. In plasma loss physiologic saline solution so commonly used is not effective. In fact, it may be harmful, as is shown by Lee, Elkinton, and Wolff,[13] and others. In the normal capillary bed arterial pressure forces water and crystalloids into tissue spaces; at the venous end of the capillary bed, where the pressure is less, osmotically active plasma proteins draw water and crystalloids back into the blood stream. This action is regulated by a delicate balance between capillary permeability, blood pressure and the osmotic pressure of plasma proteins. In shock, capillary permeability is increased, plasma protein passes into tissue spaces, and there is no return of fluid into the blood vessels; hemoconcentration and edema of the tissues result. When excessive amounts of saline are given intravenously, a temporary increase in blood volume takes place, but this additional fluid dilutes the already existing low protein concentration to the edema level. The use of plasma increases the osmotic pressure inside the capillaries and restores the fluid balance better than any other substance. Strumia, Wagner and Monaghan[10] summarized the advantages of citrated blood plasma as follows: (A) It can be readily prepared and safely transported. (B) It can be stored indefinitely. (C) It is safe and free from reactions. (D) It can be used in large and repeated doses. (E) It is ready for immediate use. (F) It does not add to the concentration of erythrocytes if this condition is present.

As anoxia is the eventual result of peripheral circulatory failure, it is evident that the use of oxygen is indicated both in the prevention and treatment of shock, as pointed out by Boothby, Mayo and Lovelace,[14] who advocated 100 per cent oxygen. Other treatment includes morphine for pain and restlessness, warmth and rest, and the use of adrenocortical extract is helpful in cases of excessive plasma loss, especially that incident to burns. Caffeine and coramine, being respiratory stimulants, may have an indirect effect that is beneficial but they are not considered as having much effect on the circulation itself.

CONCLUSION

It behooves all physicians to become "shock conscious" and to keep in mind the prevention, diagnosis and treatment of this syndrome. All patients exposed to sufficient precipitating causes, medical as well as surgical, should be considered as potential victims of shock, and the minimal manifestations should be treated immediately and adequately.

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DISCUSSION

Dr. Walter C. Jones, Miami: Dr. Arnold has ably covered the subject of shock, and I will not go into further detail in discussing it. I should simply like to talk a few minutes on surgical shock, that phase with which I am more familiar. I like to think of every surgical case as potentially one of shock. If the surgeon in treating his cases keeps in mind that the possibility of shock is always imminent, he is more on guard. In consequence the extreme degree of shock which is practically uncontrollable is not observed as often as it would be if he did not watch for it.

Dr. Arnold has brought out the importance of early recognition and adequate treatment in cases of shock.

Surgical shock is of either the primary or delayed type. The primary type of shock can be recognized and can be prevented by careful watching during the process of the operation. The early signs of primary shock in the surgical patient can be recognized by a careful anesthetist, and the condition can often be corrected by getting down to the cause of the trouble. It may be due to loss of fluid during prolonged operative procedure if there has been prolonged oozing such as occurs in breast cases with wide excision of tissue. A great deal of plasma is lost, and it may be necessary to use plasma during the operative procedure in order to combat shock as it arises.

Another frequent cause of shock in surgical patients is roughness in handling tissues and traction on vital parts. That, of course, can be prevented, but the surgical technic should be watched closely in order to handle the patient in a way to prevent trauma to the parts that are involved.

I cannot stress too much the value of a careful anesthetist in the prevention of surgical shock. If he is on guard, he can forewarn the surgeon before serious trouble arises.

The secondary type of shock or delayed shock may become evident at any time within twenty-four or thirty-six hours after the operation. Again it is necessary that the fluid balance be maintained postoperatively. I think this measure is most essential. If the maintenance of the fluid balance postoperatively is not neglected, the amount of secondary shock caused by evaporation or oozing will be greatly reduced. During the first twenty-four or forty-eight hours postoperatively the fluid level must be brought back to normal; otherwise one is flirting with the possibility of delayed shock.

In this paper Dr. Arnold has shown definitely that the fluid balance cannot be brought back to normal by water and electrolytes. Delayed shock must be treated with blood plasma or whole blood in order properly to combat the condition. Electrolyte solutions often simply exaggerate the state in which the patient may be found.

I have enjoyed this paper and the privilege of discussing it. The subject of fluid balance and electrolyte balance is so extensive that a short discussion does not permit adequate presentation of it.

Dr. Arnold (concluding): I should like to thank Dr. Jones for his discussion. The subject of shock has a number of phases, some of which are not well understood. A great deal has been learned, however, and if this knowledge is fully utilized, it will give our patients a better chance to survive. The purpose of this paper is to stimulate interest in this very important subject.

THE SULFONAMIDE GROUP IN SURGERY

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Control of infection, potential or already present, is a major principle of surgery. The sulfonamides used locally and systemically now outrank all chemical agents employed to combat established infection, and they reinforce asepsis in many procedures carrying the potentialities of bacterial inflammation. Sinclair and Barker[1] applied sulfanilamide tablets directly to oral wounds for treatment and prophylaxis of infection in 1937. Compound fractures were treated with local implantation of sulfanilamide crystals by Jensen, Johnsrud and Nelson,[2] who reported healing without infection in their series of cases. The local use of the drug is the privilege of the surgeon who can apply the chemical at the most needed point, obtaining the highest concentration at the front line of the defense. With sulfanilamide, a concentration of 800 milligrams per hundred cubic centimeters may be secured at the source of the infection, and with the simultaneous addition of sulfathiazole a further concentration of this less soluble drug occurs up to approximately 200 milligrams. These chemicals have a bacteriostatic effect on most of the pyogenic organisms encountered in surgery. Practical experience has shown the higher concentrations of the locally applied drugs have greater bacteriostatic effect than do the usual blood levels of oral administration. Except for the minor disadvantages of increased bleeding and serum formation, there have been no ill effects from the local use of sulfonamides.

In the 100 consecutive surgical cases of our series the drugs were applied locally whenever possible and also were given systemically by oral and parenteral routes. In 97 of these cases sulfanilamide or sulfathiazole, or both drugs were applied to the wounds. The dry powder was sprinkled about the surface of the wound so that a thin layer was formed as uniformly as possible on all surfaces. An amount sufficient to form this thin layer only was used; no large masses were allowed to remain. In cases of abdominal infection 5 Gm. of sulfanilamide mixed with 5 Gm. of sulfathiazole was used in the treatment of the average 150 pound adult, two thirds of the mixture being placed within the peritoneal

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cavity and one third in the incised wound. Early in the series, 18 Gm. of sulfanilamide was used in the treatment of patients with perforating peptic ulcer and perforating appendicitis. Except for extreme cyanosis, no ill effects were noted, but this amount was probably greater than was needed.

The drugs were prepared for use by placing a measured amount in a sterile, wide mouth glass bottle, which was autoclaved with its contents for fifteen minutes at 10 pounds of pressure. The container was corked tightly to prevent absorption of moisture and resulting caking of the crystals. Caking is usually more evident with sulfanilamide than with sulfathiazole because of the greater solubility of sulfanilamide. If conglomeration of the crystals occurs, the masses should always be broken up into powder before use in the body. Mueller[3] recommended sterilization by dry heat for two hours at 140 C. This method should be more satisfactory than autoclaving because it eliminates moisture. We do not have access to the properly controlled dry heat, and our attempts at this type of sterilization have resulted in destruction of the drug because of excessive heat. The reason for sterilization is to destroy the bacteria on the outside of the bottle and in the wrappings so that the container can be handled at the operating table. Autoclaving of a tightly corked bottle does not allow penetration of steam into the bottle, and there is little if any action upon the drug.

The sulfonamides were used parenterally in the treatment of 28 cases. Sulfanilamide in an 0.8 per cent solution of normal saline was used for hypodermoclysis in 5 cases. The present practice is to use a 0.5 per cent solution of sodium sulfathiazole in normal saline for this purpose. Five grams of sodium sulfathiazole is dissolved in 1,000 cc. of normal saline. A higher concentration should never be used for injection beneath the skin because the extreme alkalinity is likely to cause sloughing. Nothing but transient soreness resulted from the repeated use of a 0.5 per cent solution of sodium sulfathiazole in 23 cases. The injection of 500 cc. of this solution every eight hours until a total of 1,500 cc. containing 7.5 Gm. of sodium sulfathiazole has been administered, insures a blood level of 3 to 5 mg. in the average 150 pound adult receiving a total of 3,500 cc. of fluids in twenty-four hours.

In the greater number of the cases of this series infection was established at the time of the surgical procedure (table 1). Infection was a potential threat in 21 cases and the use of sulfonamides in these cases was experimental. The extremely successful results obtained in traumatic wounds and in anastamosis of the bowel, as the four gastric resections, were gratifying. In large, extensive surface wounds, exemplified by the radical mastectomy, the increase in bleeding and serum formation was striking. We have discontinued the use of the chemicals in such wounds.

TABLE 1.—DIAGNOSES IN 100 CASES

Appendicitis		29
Acute suppurative and gangrenous	16	
Perforating with peritonitis	8	
Perforating with abscess	4	
Traumatic with hematoma of omentum and contused parietal peritoneum	1	
Duodenal Ulcer		6
Perforating	2	
Perforating with abscess formation	1	
Other complications	3	
Cancer of Stomach		1
Traumatic Intestinal Perforation		2
Subacute Cholecystitis with Cholelithiasis		2
Gangrenous Ovarian Cyst		1
Inguinal Hernia		3
Major Burns		12
Mesenteric Lymphadenitis		2
Suppurative Inguinal Adenitis		2
Carcinoma of the Breast		3
Deep Abscesses		13
Brodie's of humerus	1	
Traumatic subperiosteal with pyemia	1	
Leg with pyemia	1	
Hand	6	
Others	4	
Cellulitis		4
Facial	2	
Pelvic	1	
Lower extremity	1	
Multiple Extensive Lacerations Including Tendon and Hand Injuries		12
Puncture Wound of the Lung with Pneumonitis		1
Infected Cysts		2
Compound Fractures		3
Open Reduction of Fractures		2

The primary closure and healing of infected wounds through the use of these drugs is of special interest. A small appendiceal abscess was obliterated by removing the pus by suction and removing the gangrenous appendix. After application of sulfanilamide and sulfathiazole the wound was closed without drainage. A Brodie's abscess of the humerus was evacuated, sulfonamides were applied, and the wound was closed tightly. Two wounds through which supperative lymph nodes were excised were closed without drains. In these 4 cases the patients recovered without the slightest signs of continued infection, and the wounds have remained solidly healed. Other appendiceal abscesses were treated by using

drainage because of the widespread infection present and the uncertainty of complete removal of infected tissue. It is only the unusual abscesses which can be cleared away without soiling, and in most cases of this type there should be continued drainage.

TABLE 2.—OPERATIONS

Appendectomy	30
Drainage, appendiceal abscess	1
Closure, perforating peptic ulcer	2
Drainage, subdiaphragmatic abscess	1
Gastric resection	4
Closure, traumatic intestinal perforations	2
Cholecystectomy	2
Hernioplasty	3
Excision of infected cyst	3
Debridement, burns	12
Excision of suppurative lymph nodes with primary closure	2
Radical mastectomy	3
Incision and drainage	12
Repair of lacerations, including tendons	12
Debridement, compound fractures	3
Open reduction fractures	2
Osteotomy and drainage of Brodie's abscess	1

SUTURES

Cotton	47
Chromic catgut	28
Silkworm gut	1

TABLE 3.—BACTERIOLOGY IN 48 CASES

Staphylococcus aureus	16
Staphylococcus hemolyticus	1
Streptococcus hemolyticus	4
Bacillus coli	15
Bacillus coli and Staphylococcus	1
Bacillus coli and Streptococcus hemolyticus	1
Bacillus coli and Streptococcus fecalis	1
Bacillus welchii	1
Bacillus welchii and Bacillus pyocyaneus	1
No growth	7

TABLE 4.—METHODS OF ADMINISTRATION

	Sulfathiazole	Sulfanilamide
Local	44	56
Oral	75	8
Parenteral	23	5

AVERAGE BLOOD LEVELS

	Sulfathiazole Milligrams	Sulfanilamide Milligrams
First Day	4.5	6
Second Day	5.9	8.2
Third Day	4.8	12.5
Fourth Day	4	8.6
Fifth Day	4.1	7.5
Sixth Day	3	
Seventh Day	4.5	
Eighth Day	3	

TABLE 5.—SULFONAMIDE REACTIONS

Nausea	40
Nausea and vomiting	9
Cyanosis	7
Chills	5
Fever	12
Leukopenia and anemia	0
Hematuria (microscopic)	10
Anuria	0
Skin eruptions	3
Previously sensitized	2
Increased bleeding	8
Serum in wound	6

Specimens for aerobic and anaerobic cultures were obtained in 48 cases, and the results of culture are shown in table 3. Infection caused by the Bacillus welchii was present in 2 cases of appendiceal abscess; in both the patient recovered. A boy with staphylococcic pyemia resulting from a traumatic subperiosteal abscess died after eleven days of intensive therapy with sulfathiazole. Necropsy showed metastatic abscesses which were probably well established before the beginning of treatment.

The routes of administration and an average of the resulting blood levels are shown in table 4. A patient with peritonitis received a local application to the peritoneal surfaces at operation, hypodermoclysis of a 0.5 per cent solution of sodium sulfathiazole during the period when duodenal suction was used, and sulfathiazole administered orally when function of the gastrointestinal tract was reestablished.

Determinations of sulfanilamide in the blood were made twelve hours after peritoneal administration and before supplementary usage in some cases. Twelve to 16 Gm. of sulfanilamide used intraperitoneally caused a concentration of approximately 8 to 10 mg.

Adverse reactions to the sulfonamides were numerous and annoying, but in no instance was there a threat to life or permanent injury (table 5). All patients were seen at least twice daily, and a fluid intake which produced a urinary output of at least 1,000 cc. was strictly enforced. As a rule total and differential leukocyte counts and urinalysis were made every other day. Most patients had recovered from infection by the time drug reactions developed, and immediate discontinuance of the sulfonamides prevented severe reactions.

Two patients had been previously sensitized to sulfathiazole. An intoxicated man, with major trauma to tendons and muscles of the arm resulting from an automobile accident, received 2 Gm. of sulfathiazole locally and 6 Gm. orally during the first twenty-four hours of treatment. There developed chills with a rise in temperature to 106 F. eighteen hours after repair of the wound. He was stuporous, and a maculopapular rash appeared on his chest a few hours later. There was no infection of the wound. Withdrawal of the drug and the administration parenterally of large amounts of fluids were followed by quick recovery. In this case there was a history of sulfa-

thiazole therapy over a ten day period for gonorrheal urethritis six months previously. In the case of another patient with local peritonitis due to appendicitis the same type of reaction of mild-ei degree developed. This patient had received sulfathiazole therapy for pneumonia eight months before.

The exact percentage of patients manifesting sensitivity to sulfathiazole is not known, but perhaps most of those having chills, fever and skin rashes during treatment are sensitized and will react promptly to any future administration. Aside from the primary reactions, this sensitization should be a strong deterrent to the use of sulfathiazole for minor and inconsequential infections. The drug is too valuable for such misuse, which may prevent its administration during treatment of a life-threatening infection.

SUMMARY

1. The sulfonamides are extremely helpful in controlling and preventing surgical infections. They may be used locally in the form of sulfanilamide and sulfathiazole crystals with excellent effect and without damage to tissue. In large extensive wounds there may be excessive bleeding or serum formation due to implantation of the crystals.

2. Sodium sulfathiazole may be administered in a 0.5 per cent solution in normal saline for the purpose of hypodermoclysis. A stronger solution cannot be used beneath the skin.

3. In the 100 cases of this series there were no severe or permanent adverse reactions.

4. Some patients become sensitized to the sulfonamides, especially sulfathiazole. The drugs should not be used except when sufficient indication exists.

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Professional Bldg.

POSTPARTUM HEMORRHAGE

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The two major causes of maternal mortality, sepsis and hemorrhage, can to a large extent be eliminated by adequate prenatal care and better technic of delivery. Although sepsis leads the causes of death, hemorrhage preceding it is often an important contributing factor, and the prevention of hemorrhage will greatly decrease its incidence.

A loss of 100 to 300 cc. of blood is considered a necessary part of normal labor. The escape of a quantity in excess of that amount is considered a postpartum hemorrhage, and although patients have been known to survive a loss of 2,000 and even 3,000 cc., any quantity over 1,500 cc. should be replaced by transfusion.

Many ingenious devices have recently been perfected for measuring the amount of blood lost, the most practical of which consists of separative drains by which amniotic fluid and blood are shunted into separate containers for weighing or measuring. This apparatus is chiefly of scientific interest and is not widely available. The necessity for its use can be eliminated by preventing hemorrhage.

Nature does her part with the plethora of pregnancy (polyemia), which exists from the second trimester on. The blood volume of nonpregnant persons is usually estimated at from 1/20 to 1/16 of the body weight, and in pregnant women the estimation is raised to from 1/14 to 1/12.

An increased cholesterol content of the blood hinders the physiologic destruction of existent red blood cells, and increased nutrition facilitates the formation of new cells. Iron, being an essential constituent of hemoglobin, is especially in demand at this time and should be added to the diet from the fourth month on as there is a need of this element in both fetal and maternal metabolisms. A monthly hemoglobin determination acts as a check on the dosage, and while it is being ascertained, it is a simple matter to test the coagulation time. If it is of longer duration than five minutes, an estimation of prothrombin may be made following the technic of Quick. If the prothrombin level is between 70 and 80 per cent of normal, spinach, watercress, if available, and lettuce are added to the diet as they are the natural sources of vitamin K and subsequently of prothrombin.

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Javert and Macri[1] established that the prothrombin level is lowest in early pregnancy, probably on account of a lowered intake of vitamin K because of morning sickness, nausea and vomiting. Thereafter, its course is upward, and it is highest at term. These authors also demonstrated that the administration of mineral oil interferes with the absorption and adsorption of vitamin K in the intestine by inhibiting bacterial synthesis. They observed that it causes a profound drop in the prothrombin level, which cannot be completely counteracted by the administration of vitamin K, for a rise in the level occurs only when the oil is stopped. Mineral oil also inhibits the absorption of carotene, the precursor of vitamin A, and the fat soluble vitamins D and E; so it is not the harmless laxative the public has been led to believe.

In a series of 30 cases, in 18 of which there was a clotting time of four minutes or more, mineral oil was prohibited, vitamin K was administered by mouth during the last month of pregnancy, and at the onset of labor an intramuscular injection of thylohydroquinone, commercially known as synkamin, was given. The average loss of blood at the time of delivery was less than 200 cc., and in only one case was there a postpartum hemorrhage with a loss of 300 cc. of blood. In this case the patient was sensitive to barbiturates, and the uterus was atonic following analgesia with ether.

Vitamin K is not a hemostatic and is of value purely as a prophylactic. Its administration is ineffective, and its action is too slow for use when hemorrhage has already occurred.

Of equal importance in the prophylaxis of postpartum hemorrhage is the conduct of the third stage of labor. Without any thought of the natural mechanism, the uterus is often grabbed, violently squeezed and variously insulted in a manner that would make old Dr. Crede roll over in his grave. After the placenta has been torn loose, the entire uterus is incorrectly used as a piston to shoot the placenta out, and in many cases the fundus is left pushed down in the pelvis with consequent obstruction to venous drainage and overflow through the maternal sinuses. It is a relatively simple matter requiring little additional time to use the Pastore technic. It consists of palpating the fundus with the right hand, noting the change from a smooth discoid to a globular shape, and then with the left hand flat on the symphysis preventing prolapse into the pelvis exerting moderate pressure on the fundus and feeling the placenta slip through the lower uterine segment into the vagina, traction on the cord lifting the placenta through the vulva.

When hemorrhage occurs after a properly conducted third stage, the fundus is again a diagnostic point. If it is hard, and the uterus is well contracted, a cervical tear or a gutter type tear in the muscle is usually present. The prophylaxis of cervical tears requires no pituitrin even in minute doses to stimulate sluggish second stage pains, but rather morphine, or preferably syntropan, to soften the cervix and facilitate dilation. In the treatment of the tear a suture is placed high at its apex for control, with lower sutures loosely tied for apposition.

If the fundus is soft, and the uterus is atonic, the fault may have been the use of too much barbiturate in producing analgesia, or too prolonged anesthesia produced by ether. The treatment consists of massage first, and then later the administration of pituitrin followed by ergot, or one of the preparations containing it. For prompt action when massage does not hold the contraction, the intravenous injection of 3 drops of pitocin, the protein-free oxytocic principle of the posterior lobe of the hypophysis, is the method of choice.

There is the postpartum hemorrhage one hears about and hopes he will never see in which the uterus remains flabby and atonic with unclosed sinuses, large clots and blood gushing from the vagina as from an open faucet. For this type Timberlake[2] recommended placing ice on the abdomen, and Goodman[3] suggested introducing ice into the uterus itself. Packing is not recommended as it takes too much time and the bleeding continues ahead of the pack. Expression of the clots, massage, the application of ice and the intravenous administration of pitocin give the best results.

CONCLUSION

This is not a scientific paper. Nothing new has been presented; the brain children exhibited all have other fathers. Summarized, the contents simply state that by administering iron and vitamin K during pregnancy and by taking time and having a little respect for the uterus in the third stage of labor, an appreciable amount of maternal blood can be saved.

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MEDICAL MANPOWER

In recent weeks much publicity has been given, not only on a state but on a national scale, to the existing shortage of medical care and to the fact that there is impending a still more acute shortage. Many factors have conspired to bring this issue to the fore; among them is the fact that members of the medical profession, particularly in Florida, have gone into the Armed Services in large numbers. It is probable that we have sent as large, if not a larger, proportion of doctors into the Army and Navy than any other state. This has naturally lead to a shortage of physicians in many communities and, in a few, people have been left without any medical care.

Under the original procurement and assignment registration many physicians expressed themselves as willing, if the emergency demanded, to be moved to areas within the state where their services might be needed. In spite of this, there are some communities, and there will be others, which are in urgent need of physicians. How these communities can be supplied with doctors when those practicing at home are working to their full capacity is a problem which will have to be solved.

Much criticism has been directed toward medical associations, state boards of medical examiners and others who are interested in this problem, which criticism has been based on the false premise that these bodies are obstructing rather than aiding in the solution of this problem. This accusation is certainly far from the truth insofar as the state of Florida is concerned. Arrangements have been made whereby doctors can be and are being moved into communities where a shortage exists, and every agency concerned is cooperating to the fullest extent, recognizing the seriousness of the emergency.

It would seem that before such serious charges and such inaccurate statements are made by those whose knowledge is not complete, some effort should be made to determine how far the medical profession has gone in trying to solve this problem.

The War Participation Committee of the Florida Medical Association has discussed at length ways and means by which doctors may be encouraged to move to communities where a shortage exists but there is no machinery by which such moves can be made compulsory and, as previously stated, physicians are reluctant to move voluntarily. A great deal of thought has been given to this matter by the members of our committee, and they are exerting themselves strenuously in an endeavor to accomplish the desired end.

The State Defense Council has passed a resolution whereby it is possible, on request of the Council and with the approval of the Board of Governors of the Florida Medical Association, for doctors in the United States Public Health Service to be assigned to communities where no medical care exists. In such communities the people receiving care, who are financially able to do so, will be required to pay fees in accordance with the usual charges for such services in their particular area. This arrangement is very important, inasmuch as, in the first place, it will not pauperize the people and, in the second place, it will allow a physician to go into a community and engage in the practice of medicine on a normal, competitive basis. This provision will be automatically terminated at the end of the emergency by reason of the fact that the law constituting the State Defense Council provides that that body shall be discontinued at the end of the emergency.

Arrangements have also been made whereby at the request of a county medical society certain doctors may be allowed to practice for the duration of the emergency under the supervision of the Chief of Emergency Medical Service and by special permission of the State Board of Medical Examiners. This arrangement, too, ends with the termination of the emergency.

The foregoing facts clearly show that, certainly as far as Florida is concerned, the medical

profession is cooperating. President Gilbert S. Osincup, knowing the members of the profession as he does, feels positive that our Government can depend upon them to do their full share at all times.

PROCUREMENT AND ASSIGNMENT SERVICE

A communication issued for immediate release to medical journals by the Office of War Information, War Manpower Commission, was received on October 26, and is reproduced for the benefit of our readers, at the request of Dr. Edward Jelks, Chairman of the Florida War Participation Committee:

> The Directing Board of the Procurement and Assignment Service is pleased to announce that 95 per cent of the 1942 procurement objective of medical officers for the armed forces has already been met. Toward this total a number of states have supplied more than their share of physicians and only a few states are lagging behind in their quotas. It is from these states that the additional physicians needed during the current year should come.
>
> The recruitment of such a large number of physicians in a few months is a remarkable achievement and another demonstration of the traditional patriotism and unselfishness of the medical profession. In this achievement, and particularly in those of its members who are "in service," the profession can justifiably take pride.
>
> The end, of course, is not yet. Increases in the armed forces will necessitate more medical officers and additional demands will be made upon the profession for medical services in critical war production areas. The Directing Board is convinced, however, that the physicians of this country will respond to future calls for service, whatever they may be, in the same splendid manner with which they have already volunteered for service with the armed forces.

DOCTORS IN MILITARY SERVICE EXEMPT FROM ANNUAL REGISTRATION

Doctors are not required to keep up their annual registration with the State Board of Health while they are in military service.

The Florida statutes require physicians licensed to practice medicine in Florida to register annually with the State Board of Health and pay the statutory fee of $1.00. This provision, however, does not pertain to physicians in the armed services according to an opinion received from Hon. J. Tom Watson, Attorney General, dated Oct. 3, 1942, which reads in part as follows:

> With reference to physicians licensed by the State Board of Medical Examiners . . . . serving in the armed forces of our country, it is my opinion that the annual registration with the Secretary of the State Board of Health, and the payment of the $1 fee, may be waived without affecting their civil status as practitioners of the healing art in this state.

WAR BOND SALES

The Association's Board of Past Presidents has undertaken the task of soliciting donations from the membership for the purchase of war bonds. The chairman of this Board appointed Dr. H. Mason Smith of Tampa as Chief of War Bond Sales.

One-fourth of the Association's membership is now in the Armed Services and others are leaving at the Government's call. The doctors at home are, therefore, making voluntary contributions with which the State Association is to buy war bonds and in this way keep up the annual dues of our members who are serving their country.

Dr. Smith is just in the initial stage of organizing the past presidents and their deputies as this Journal goes to press. There is every indication that this plan undertaken by the past presidents will be enthusiastically received by the membership as a whole. Every response received from the past presidents contacted the latter part of October was prompt and enthusiastic, and a contribution was received, in every letter. In next month's Journal Dr. Smith plans to have a list of the members who make contributions to the State Association for the purchase of war bonds.

ANNUAL REGISTRATION OF CHIROPRACTORS, NATUROPATHS AND CHIROPODISTS DISCONTINUED

The 1927 Act requiring annual registration of all practitioners of the healing arts is no longer operative *(Ch. 12005)*. Doctors of medicine and osteopaths are, however, still required to register under the provisions of their respective practice acts.

A communication from Hon. J. Tom Watson, Attorney General, Tallahassee, to Dr. Henry Hanson, State Health Officer, dated October 3, states:

> I have checked Chapter 12005, supra, and find that said law was not brought forward and included in the Florida Statutes 1941, and therefore is no longer operative.

This annual registration of practitioners of the healing arts has been carried on by the State Board of Health since 1927. According to the letter from the Attorney General, however, the present status of the matter is this: doctors of

medicine and osteopaths continue to register annually with the State Board of Health; the registration of other practitioners designated in the Act is discontinued.

MEETING OF ADVISORY COMMITTEE, COUNCIL FOR THE BLIND

The Advisory Committee for the Florida Council for the Blind, authorized by the Florida Society of Ophthalmology and Otolaryngology at its meeting last April, met in Tampa on August 23 and held a conference at the office of the Council with Mr. R. Henry P. Johnson, Executive Director, and Miss Elizabeth O'Malley, Supervisor of Sight Conservation. Mr. James Warren of Tampa, a member of the State Welfare Board, also was present. The members of the Committee are Dr. S. B. Forbes, of Tampa, chairman; Dr. Bascom H. Palmer, of Miami, and Dr. Charles W. Boyd, of Jacksonville.

The Committee members voted to give their services without remuneration for the duration of the war, or until such time as a single consulting ophthalmologist can be employed by the Council, and they agreed to invite other ophthalmologists to advise and assist the Council on a volunteer basis. It was further agreed that the members of the Florida Medical Association be requested to provide general physical examinations without charge and that the services of the Florida Dental Society be sought on a similar basis. The Council assumed responsibility for payment of the cost of material used, as in roentgen examinations or dentistry.

Since the funds available to the Council are meager and by no means commensurate with the needs, it was decided that the cost of hospitalization, transportation, nursing, convalescent care, medicine and glasses be given careful consideration in each individual case. It was deemed advisable to select a limited number of suitable cases for initial treatment with a view to broadening gradually the scope of the program. Of 288 cases selected by the Council as available for treatment at the present time, 132 were classified as favorable. A very large proportion are cases of senile cataract. It is of interest that Florida has more Aid to the Blind recipients in proportion to its population than any state in the Union and that the rate of increased blindness, according to a study made at the State School for the Blind, is considerably higher than for the national average.

The Committee agreed to divide the state into three sections, the members assuming responsibility for furtherance of the medical features of the sight conservation program in their respective districts. Each member will advise with the Council's supervisor of sight conservation responsible for the eye care program regarding cases in his territory and will seek the cooperation of the Society in obtaining eye examinations and corrective medical or surgical treatment for the needy residents of the state whose cases have been carefully investigated by the Council and who are presented by this state agency for examination and treatment. The Committee also agreed to assume responsibility for the medical content of the educational features of the program and to interpret the Council policy to the medical profession.

The proposed program for the Sight Conservation Department of the Council includes: study of the causes of blindness, provision for eye examinations, treatment and care for needy patients, stimulation of interest in community programs for sight conservation, dissemination of material published in the interest of sight conservation, interpretation of the function of sight saving classes and the setting up of standards for their maintenance, and the development of policies of cooperation in sight conservation with state, county and city authorities, the Florida School for the Deaf and Blind, and other agencies.

MEETING OF GEORGIA PEDIATRIC SOCIETY

The Georgia Pediatric Society will hold its annual scientific meeting in Atlanta, December 10. The afternoon session will be at the Pompeian Ball Room, Biltmore Hotel, and the evening session at the Main Auditorium, Academy of Medicine, Fulton County Medical Society.

The following speakers will appear on the program: Dr. Alexander Ashley Weech, Professor of Pediatrics, University of Cincinnati, Medical Director of the Children's Hospital Research Foundation, Cincinnati; Dr. Meredith Campbell, Professor of Urology, New York College of Medicine, New York; and Dr. Abraham Levinson, Assistant Professor of Pediatrics, Northwestern University Medical School and Professor of Pediatrics, Cook County Graduate School, Chicago.

MEMBERS IN THE ARMED SERVICES

Authorization has just been received from the War Department to publish the names and home addresses of doctors in the armed services. Previous to this time we were advised not to publish such a list. The names in the following list were secured through the secretaries of the various county medical societies. There will be changes and corrections from time to time and any error or omission should be reported promptly to the Association at Box 1018, Jacksonville.

ALACHUA

Andrews, Edwin H. ... Gainesville
Cobb, Alva T. ... "
Dell, J. Maxey, Jr. ... "
Jennings, Lloyd H. ... Starke
Murphree, Walter E. ... Gainesville

BAY

Adams, Daniel M. ... Panama City
Parker, Martle F. ... "
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BREVARD

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Hay, I. M. ... Melbourne

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Camp, Milton N. ... "
Carson, Russell B. ... "
Cohn, Jess V. ... Hollywood
Farringer, Robert H. ... "
Lovejoy, M. Austin ... Ft. Lauderdale
Peavy, Henry J. ... "
Pierce, Francis D. ... "
Shell, Paul G. ... "
Snyder, F. Leslie ... Hollywood
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DADE

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Alexander, Julius ... Miami
Alexander, Lassar ... "
Allen, Ralph F. ... "
Arango, Roger J. ... "
Auslander, Harold P. ... Miami Beach
Baker, Juel M. ... Miami
Barge, William J. ... "
Bernstein, William H. ... Miami Beach
Bertram, Albert J. ... Miami
Boughton, Herman ... Miami Beach
Burbacher, Charles R. ... Coral Gables
Burch, John E. ... Miami
Capland, Lewis ... Miami Beach
Carroll, Bruce D. ... Miami
Christian, William A. ... Miami Beach
Clark, Irving T. ... Miami
Cleveland, Jack Q. ... Coral Gables
Cogan, James R. ... Miami Beach
Coleman, Benjamin ... "
Coplan, Milton M. ... Miami
Cullipher, Edward W. ... "
Dees, John ... "
DeVore, Louise ... "
Dieterich, Frederick H. ... "
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Dowlen, Otto S. ... Miami Beach
Eichert, Herbert ... Miami
Exley, David W. ... Miami Beach
Falk, Jack J. ... "
Fishbein, I. Leo ... "
Fitzpatrick, Emmett T. ... "
Forastiere, Roger J. ... Miami
Fox, Edward F. ... "
Frehling, Stanley ... "
Frobisher, H. B. ... Coral Gables
Garrard, Hollis F. ... Miami Beach
Goodman, Bernard ... "
Gross, Alfred ... "
Hardie, Dan, Jr. ... Miami
Hewlett, Frank W. ... Coral Gables
Hinton, Andrew H. ... Miami
Howdon, William M. ... "
Hutson, Thomas W. ... "
Jenkins, Leslie M. ... "
Kaplan, Saul H. ... Miami Beach
Kauders, Ferdinand H. ... Miami
Kells, Paul ... "
Kline, Bernard ... Miami Beach
Kuckku, Morris E. ... Miami
Kupper, William H. ... "
Lamar, Carlos P. ... "
Lawther, Harry C. ... "
LeDrew, Frederick ... "
Leonard, George N. ... Miami Beach
Levin, Alfred G. ... Miami
Litterer, A. Buist ... "
McElheny, Franklin ... "
McKenzie, E. Norton ... "
McKenzie, Jack A. ... "
McLemore, Carl S. ... Miami Beach
McLeod, Norman W., Jr. ... Miami
Marion, Dominic A. ... "
Martin, Marion C. ... "
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Mitchell, George A. ... "
Mosley, R. Sam ... "
Mouradian, Albert H. ... "
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Nuzum, Russell K. ... Miami
O'Donnell, William G. ... "
Oliver, Robert M. ... "
Otto, Thomas O. ... Miami Beach
Owens, W. Duncan ... "
Payton, Frazier J. ... "
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Pollock, Benjamin G. ... Miami Beach
Preston, Edwin P. ... "
Putman, James H. ... Miami
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Rash, Jack O. W. ... Miami
Reckson, Murray M. ... Miami Beach
Reese, Homer A. ... Miami
Richardson, John R. ... Miami Beach
Robbins, Alexander ... "
Robbins, Bernard ... "
Roberts, Thomas L. ... Miami
Rogers, Hunter B. ... "
Salley, S. Marion ... "
Sandberg, T. D. ... Coral Gables
Sappenfield, Ralph S. ... Miami
Saslaw, Milton S. ... Coral Gables
Scarborough, C. A. ... Miami
Schwarz, M. Jandon ... Miami Beach
Selevan, Sol ... "
Silverman, Harry Z. ... "
Sisler, Bruce H. ... Miami
Skilling, Francis C. ... "
Spicer, Robert T. ... "
Stannus, Donald G. ... Miami Beach
Sternberg, J. Charles ... Miami
Stewart, Franz H. ... "
Stewart, Joseph S. ... "
Thomas, Efton J. ... Miami Beach
Torrado, Rene A. ... "
Travers, M. Paul ... "
Turk, John P. ... Miami
Vinson, Willie J. ... "
Voris, Frank B. ... Miami Beach
Wallace, Albert W. ... "
Walsh, Gerald J. ... Miami
Weiland, Arthur H. ... Coral Gables
Werblow, S. Charles ... Miami
Whelchel, Lynn W. ... "
Whitmer, Kenneth S. ... "
Wigdor, Meyer ... Miami Beach
Woods, Frank M. ... Miami
Youmans, Corren P. ... "
Zimmerman, Paul A. ... Coral Gables
Zivitz, Nelson ... Miami Beach

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McSwain, Gordon H. ... Arcadia
Martin, Leldon W. ... Sebring
Simmons, S. J. ... Belle Glade

DUVAL

Adams, Thomas S. ... Jacksonville
Baker, Archie J. ... "
Baldwin, Donald M. ... "
Ball, William H. ... "
Bedell, Sullivan G. ... "
Borland, James L. ... "
Bowen, Frederick H. ... "
Boyd, Charles W. ... "
Canipelli, Edward ... "
Carithers, Hugh A. ... "
Croft, George W. ... "
Ferrara, John D. ... "
Funkenstein, Dan H. ... "
Galin, Jack ... "
Gorman, John M. ... "
Graves, A. Judson ... "
Haverfield, W. Tracy ... "
Hurt, Floyd K. ... "
Kemp, Simon I. ... "
Kendrick, M. Hayne ... "
King, Raymond H. ... "
Kirk, William W. ... "
Lombardo, Samuel S. ... "
Lovejoy, John F. ... "
McCullagh, William H. ... "
Malone, Bert H. ... "
Mangels, Martin, Jr. ... "
Manning, William S. ... "
Manson, A. Mackenzie ... "
Mathers, Daniel H. ... "
Mendoza, Carl C. ... "
Milam, Ernest B. ... "
Nelson, Thomas F. ... Tampa
Oberdorfer, Aaron Z. ... Jacksonville
O'Dell, John C. ... "
Oetjen, G. F. ... "

Parks, Lorenzo L. Jacksonville
Porter, Harry W. "
Richards, Ferdinand "
Rose, Joseph "
Safer, Jacob V. "
Simmons, Eugene D. "
Slaughter, Frank G. "
Sompayrac, Lauren M. "
Stamps, Walker "
Strumpf, Irving J. "
Swift, Edwin C. "
Watt, E. Clements "
Wattles, F. Merrill "
Weil, Nathan, Jr. "
Weinreb, Joseph "

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Click, Gustav N. "
Essrig, Irving M. Tampa
Hixon, William P. Pensacola
McSween, John C. "
Mellen, Noel C. "
Morse, George W. "
Randall, William S. "
Rubin, Nathan S. "
Stebbins, Alvin L. "
Tugwell, Wilton E. "
Turberville, Joe I. Century
Williams, William L. Pensacola

HILLSBOROUGH

Adamo, Frank S. Tampa
Annis, Leonard S. "
Blackmon, Heyward J. "
Brown, Harold O. "
Chunn, C. Frank "
Cole, Herschel G. "
Costantino, Eugene F. "
Cowart, James T. "
Heath, Ralph T. "
Helms, John S. "
Hewit, Linus W. "
Jefferson, Curtis B. "
Knowlton, Horace A. "
Linz, Frank T. "
Martin, Douglas D. "
Mertz, R. Bradner "
Murphey, David R. "
Nix, Harold G. "
Parsons, Hugh E. "
Rudisill, C. A. "
Torretta, Joseph N. "
Trice, William W. "

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Bowen, Louis R. Eustis
Bowie, Clyde F. Leesburg
Gleason, Albert H. Umatilla
McGuire, John F. Clermont
Oetjen, Leroy H. Leesburg
Wood, Will L. Eustis

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Allan, Harry L. Ft. Myers
Clement, W. B. Punta Gorda
Girardin, A. L., Jr. Ft. Myers
Jennings, John L. Boca Grande
Stead, Vergil G. Naples
Stipe, Harvie J. Ft. Myers

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Harrell, Henry L. "
Lytle, Carl S. "
Moore, John P. "
Russell, Ralph E. "

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Gwathmey, G. Tayloe "
†Hatfield, John R. "
Henderson, Robert P. "
Hitchcock, Edgar E. "
Hoffmann, Carl D. "
Ingram, Hollis C. "
Irwin, Thomas M. "
Jewett, Eugene L. "
Kingsbury, Lawrence H. "
Kundert, Palmer R. "
Mathers, Fred "
Mitchell, William S. "
Orr, Louis M. "
Ramsey, Russell W. Winter Park
Robertson, Don C. Orlando
Scanlon, John J. Winter Garden
Sears, Warren H. Winter Park
Sessions, Raymond R. Kissimmee
Stecher, Joseph L. Orlando
Sutter, Leroy M. "
Taylor, Byrne E. "
Zieve, Sanford L. "

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Dawson, G M. " "
Derrick, C. J. " "
Gill, Richard S. " "
Herpel, F. K. " "
James, Lorenzo, Jr. Camp Blanding
Kelly, Oscar L. West Palm Beach
Nieder, James R. Delray Beach
Ombres, S. Richard Palm Beach
Rotter, Saul D. Lake Worth
Sory, Bailey B. Palm Beach
Sory, James R. West Palm Beach
Stanley, Thomas Z. " "
Weems, William H. " "
Wilkins, William B. Palm Beach

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Farrington, C. L. "
Feaster, Orion O. "
Frederick, A. R. "
Funk, Neil E. "
Gable, Linwood M. "
Gable, N. W., Jr. "
Grace, Angus D. "
Groves, W. H. Clearwater
Hagan, V. LeRoy "
Hagood, John D. "
Harden, W. W. St. Petersburg
Harrison, Everett M. Dunedin
Hebard, Charles E. St. Petersburg
Langley, Francis H. "
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Marr, Norval M. "
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Needles, Robert J. "
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Quicksall, J. Braden St. Petersburg
Rogers, H. Milton "
Rowell, John P. "
Rudolph, Councill C. "
Ulm, A. Hardy Dunedin
Whaley, F. Eugene St. Petersburg
Wood, Rowland E. "
Wright, Claude B. "
Wylie, LeRoy A. "

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Barranco, Anthony J. Lake Wales
Bosworth, Joe M. Lakeland
Clark, Samuel J. "
Dykes, Chapman Haines City
Gachet, Fred S. Lakeland
Hargrove, Julian L. Bartow
Keramidas, T. C. Winter Haven
Kibler, John M. Lakeland
Lancaster, L. L. Bartow
Martin, Emmett E. Haines City
Ralston, Raymond H. Lakeland
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Gurganious, Allen P. "

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Martin, Leon H. Ft. Pierce
Robertson, James C. Vero Beach
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Butcher, John M. Sarasota
Hoskins, W. H. Venice
Martin, Stanley T. Sarasota
Matthews, A. Lamar "
Miller, Cecil E. "
Patton, Sherrel D. "
White, Millard B. "

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Barks, Orville L. Sanford
McDaniel, Thomas F. "
Park, Charles L. "

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Jennings, William L. " "
Jones, C. B. New Smyrna Beach
Lenholt, Eric H. Daytona Beach
Myres, M. J. " "
Reeser, Richard, Jr. " "
Rutter, Joseph H. " "
Setzer, Morris B. " "
Silsby, Harry Z. New Smyrna Beach
Tribble, Charles E. DeLand
Wells, J. Ralston Daytona Beach
West, J. Richard " "
Whitney, Karl R. " "

WASHINGTON-HOLMES

Watson, Francis M. Chipley

†Deceased

BIRTHS, MARRIAGES AND DEATHS

BIRTHS

Dr. and Mrs. Leland H. Dame of Sanford announce the birth of a son, John Leland, on August 14.

Dr. and Mrs. Winston F. Harrison of Miami announce the birth of a daughter, Wynne Christopherson, on September 19.

MARRIAGES

Dr. Robert H. Cleveland and Miss Hannah Elizabeth Eubank of Jacksonville were married on October 10.

DEATHS

Dr. Clifford Morgan Mitchell of Sanford died on October 5.

Dr. John Hatfield of Orlando, a Major in the United States Army, died "somewhere in the Pacific" in October, of a heart attack.

STATE NEWS ITEMS

Dr. Robert McIver of Jacksonville entertained 175 doctors, honoring Dr. Elijah Tom Sellers on his 56th birthday. The party was held on the beautiful lawn at the home of Dr. and Mrs. McIver on the river in St. Nicholas Place, Saturday, October 31, from 5 to 7.

Dr. Thomas H. D. Griffitts, who retired November 1 after thirty years of service with the United States Public Health Service, was unanimously selected as director for the new health unit in Dade County at a meeting of the Board of County Commissioners held the latter part of October.

Dr. Edmund Myers, formerly of St. Petersburg, announces the opening of his offices in the Hillsboro State Bank Building, Plant City. Dr. Myers with a partner won the Open Pair Duplicate Contract Bridge Summer Championship last August at St. Petersburg.

Notice has just been received from Dr. B. T. Beasley, secretary of the Southeastern Surgical Congress, that the meeting in Louisville scheduled for March 3-10, 1943, has been canceled on account of war conditions. The publication of The Southern Surgeon, the Journal of this organization, will also be discontinued for the duration.

Dr. Henry E. Palmer of Tallahassee celebrated the fiftieth anniversary of his practice of medicine at a dinner on October 12. A host of friends were delighted to honor Dr. Palmer on that occasion.

Dr. Henry Hanson of Jacksonville, State Health Officer, was guest speaker at a meeting of the local Lion's Club, Friday, October 9. Dr. Hanson has had experience as an immunologist and epidemiologist not only in the United States but in many Central and South American countries. His talk was so interesting and so well received that by unanimous vote he was asked to continue beyond the usual time of adjournment.

Dr. Thomas C. Black of Orlando resigned from the staff of the State Tuberculosis Sanatorium to accept the superintendency of the medical division of the Western Oklahoma State Sanatorium at Clinton, Okla., on October 15.

Dr. R. D. Thompson of Orlando was elected to the Executive Board of the Southern Tuberculosis Conference at the annual meeting of that organization held in Memphis, October 5, 6 and 7.

Florida doctors attending the Venereal Disease Short Course given by the United States Public Health Service at the Medical Center, Hot Springs, Ark., October 21-24, were: Dr. Waldo Horton, Winter Haven; Dr. J. N. Patterson, Director of Laboratories, State Board of Health, Jacksonville; Dr. W. T. Sowder, Director of Venereal Disease Control, State Board of Health, Jacksonville; Dr. Sydney Olansky, Director of the Duval-Jacksonville Venereal Disease Clinic; Dr. A. I. Kernish of the Miami Venereal Disease Clinic; Dr. J. W. McMurray, Director of the Levy-Gilchrist Health Department, Williston.

CLIFFORD MORGAN MITCHELL

Dr. Clifford M. Mitchell, a resident of Sanford for the past nineteen years, died at his home on October 5, at the age of 53.

Born in Dalton, Ga., on Sept. 10, 1889, he was graduated from Emory University School of Medicine at Atlanta in 1916. During the World War he served in the Army Medical Corps, after which he resumed his practice, first at Montezuma, Georgia and then at Palatka, Florida.

Dr. Mitchell moved to Sanford in 1923 and became associated in practice with Dr. J. N. Robson.

He was a member of the Seminole County Medical Society, the Florida Medical Associa-

tion and the American Medical Association. He was also a member of the First Methodist Church of Sanford.

Survivers include his widow, Mrs. Abbie Mitchell; his mother, Mrs. O. M. Mitchell; three sisters, Mrs. J. H. Tillis of Sanford, Mrs. E. F. Noland of Adairsville, Ga., and Mrs. G. M. Roper of Cartersville, Ga.; also two brothers, Lewis R. Mitchell of Sanford and Clyde W. Mitchell of Adairsville, Ga.

COMPONENT COUNTY SOCIETIES

DESOTO-HARDEE-HIGHLANDS-CHARLOTTE-GLADES

Dr. Henry Hanson, State Health Officer, was guest and principal speaker at a meeting of the DeSoto - Hardee - Highlands - Charlotte - Glades County Medical Society, on the evening of October 13.

PINELLAS

The annual meeting of the Pinellas County Medical Society was held at the Shrine Club, St. Petersburg, Thursday evening, October 1. Dr. W. C. McConnell was installed as president for the coming year, and the following officers were elected: president-elect, Dr. J. A. Hardenbergh; first vice president, Dr. George M. Lochner; second vice president, Dr. M. E. Black; secretary-treasurer, Dr. Annette M. Feaster. Delegates and alternates to the annual convention of the State Association were also elected: delegates: Drs. W. C. McConnell, A. M. Feaster, W. M. Davis, A. L. Mills, J. A. Herring; alternates: Drs. Grace Whitford, A. J. Bieker, J. A. Bradley, C. A. Williams, H. W. Wade.

A round table discussion was held on the evening of October 16 at the home of Dr. A. S. Anderson. Dr. Anderson acted as moderator.

POLK

Dr. A. W. Newitt, director of the Bureau of Local Health Service of the State Board of Health, was guest speaker at a meeting of the Polk County Medical Society, held in Bartow on the evening of October 14. He was introduced by Dr. R. L. Hughes. The doctors met for dinner in the dining room of the Old Folks' Home, and spent the evening discussing with Dr. Newitt the county health unit which is scheduled to be opened in Polk County on January 1.

ABSTRACT DEPARTMENT

Members of the Florida Medical Association who have had articles published in out-of-state medical journals are requested to forward such journals or reprints to Box 1018, Jacksonville, for abstracting in this department.

POSTOPERATIVE HORMONAL THERAPY TO SPARE REMAINING OVARIAN TISSUE, OWENS, W. DUNCAN, MIAMI BEACH, AM. J. OBST. & GYNEC. **43**: 326-330 (FEB.) 1942.

The author realized in 1932 with, as he states, "concern and dismay" that in an appreciable and increasing number of cases it had been necessary to remove remaining ovarian tissue. He believed that in too many cases in which the patient had had a previous ovarian operation, it became necessary to reoperate and remove the remaining ovarian tissue which had become diseased. The author states that from 1932 to 1934 various operative technics were employed in an attempt to reduce the number of necessary reoperations but that "changing technique resulted in only a small decrease in the incidence of rapid and painful cystic formation in the remaining ovarian tissue." The author mentions that in cases treated by him during this three year period, 35 per cent of the patients required a secondary operation for the removal of remaining ovarian tissue.

"In the six year period, 1935 through 1940, with follow-ups through June 1941 of 57 women who lost a part of their ovarian tissue none has required subsequent operation and only 2 have shown evidence of pathology of remaining ovarian tissue. This result is attributed to the routine postoperative use of estrogenic substance."

The author originated the following treatment by which he reduced the percentage of recurring cystic degeneration of remaining ovarian tissue: "2,000 units of estrogenic substance in oil to be given intramuscularly at a single dose each week when not menstruating; first dose eight days after operation; postmenstrual dose five days after cessation of flow." This treatment is continued for six months postoperatively because in the 29 cases studied, symptoms began within the first five postoperative months.

The author attributes the reduction of recurring cysts to the postoperative use of estrogenic substance, as 40 per cent of the patients operated upon elsewhere were relieved of discomfort or pain by this method, and a secondary operation became unnecessary.

PHOTODYNAMIC ACTION OF LIME OIL (CITRUS AURANTIFOLIA), SAMS, WILEY M., MIAMI, ARCH. DERMAT. & SYPH. 44: 571-584 (OCT.) 1941.

Oil from the peel of the Persian lime which is grown in the southeastern district of Florida has the property of inducing a localized state of hypersensitivity to solar irradiation. The degree of the reaction depends upon the concentration of the photosensitizing agent and the time of exposure to sunlight. When the reaction is severe it begins within twenty-four hours or less as an erythema and produces vesiculation, with subsequent exfoliation. Hyperpigmentation invariably follows erythema, but may be the only observed evidence of the reaction. This reaction is not an allergic manifestation, for it does not involve a state of acquired sensitivity, but takes place uniformly on any individual following topical application of the photodynamic agent and subsequent exposure to sunlight. The chemical nature of the photodynamic principle has not been determined.

This type of hyperpigmentation is similar in all respects to that observed following the application of bergamot oil (an ingredient in many perfumes) and exposure to sunlight. The hyperpigmentation produced is frequently on the hands, and so far as has been determined, does not occur from the oil of any citrus fruit other than the Persian lime (citrus aurantifolia).

EFFECTS OF PREFRONTAL LOBOTOMY ON DEPRESSED PATIENTS, WORCHEL, PHILIP, AND LYERLY, J. G., JACKSONVILLE, J. NEUROPHYSIOL. 4: 62-67, 1941.

This paper is based on a follow-up study of the more extended and permanent effects of prefrontal lobotomy performed for severe depression states. By studies of the emotional tone after operation, the subsequent course of the emotional tone, the intellectual changes, deterioration and analysis of individual test items, "free association," delusions and hallucinations, personality changes, and the difference in results obtained by right and left prefrontal lobotomy, the following summary of the effectiveness of the procedure is made:

"We note a definite heightening of the emotional tone. The subsequent course of this emotional change varies but there is a tendency to remain above the level of depression that char-

ON THE ALERT

★

AS THE layman sees it, the medical man is constantly on the alert for symptoms which will help him readily diagnose a patient's ailments, thus enabling him more readily to start treatment for effective cure.

Similar to the doctor is the bank official. He must be ever on the alert in placing financial aid where it is justified and be able to diagnose the borrower's needs in a way that will help him, and in no way jeopardize the depositors' money.

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acterized the patients prior to the operation. The psychometric tests did not reveal any significant changes in the intellectual abilities."

The authors caution that the small number of cases reported, the lack of a control group, and the difficulties inherent in objectively defining social recovery make any definite conclusions as to the efficacy of the operation unwarranted at this time.

ADVERTISERS' NOTES

TO CLIENTELE AND FRIENDS OF SURGICAL SUPPLY CO.

We are engaged in a terrible war to protect our freedom and liberties. This effort involves a price, a part of which we must all pay.

We have lost the services of approximately one-fifth of our trained personnel into the armed services of our government. We have lost others, as have many civilian businesses, into essential war effort industries. We may probably lose more.

Due to the uncertainties that these problems present to us, we find it necessary to close, for the duration, our Orlando branch, located at 33 East Pine Street. As before, we will continue to serve from our main offices in Jacksonville.

We look forward to returning when it's all over, and we anticipate with pleasure the continued privilege of serving those of you who have made our stay so happy and successful.

AGAR AND THE WAR

The war has cut off importations of agar-agar, which normally come from Japan. The War Production Board has frozen all stocks of agar in order to protect the requirements for bacteriologic culture medium use of the Army, Navy and civilian hospitals and laboratories.

This W.P.B. control of agar stocks made it necessary for Mead Johnson & Company to discontinue the manufacture of "Pectin-Agar in Dextri-Maltose," a product which has been used by the medical profession for the treatement of diarrhea in infants.

Fortunately, Mead Johnson & Company have another product, Casec, which gives good results for the same purpose. Physicians who are not familiar with Casec are invited to write for samples and descriptive literature to Mead Johnson & Company, Evansville, Indiana.

CONTINUOUS CAUDAL ANESTHESIA IN OBSTETRICS

A new method for continuous or fractional caudal anesthesia has been developed by Edwards and Hingson (Am. J. Surg., 57:459 (September), 1942). It appears to be remarkably effective and yet retains the complete cooperation of the patient. There has been uniform absence of delirium, narcosis, cyanosis, nausea, vomiting, and anoxemia, and no interference with uterine contractions. Every infant in the authors' series breathed spontaneously except one stillborn known to have been dead several days before delivery.

The technic consists in the injection of an initial dose of 30 cc. of 1½ per cent solution of 'Metycaine' (Gamma-(2-methyl-piperidino)-propyl Benzoate Hydrochloride, Lilly) followed at thirty or forty minute intervals with 20 cc of the 1½ per cent solution. In every case there has been complete freedom of pain and discomfort of

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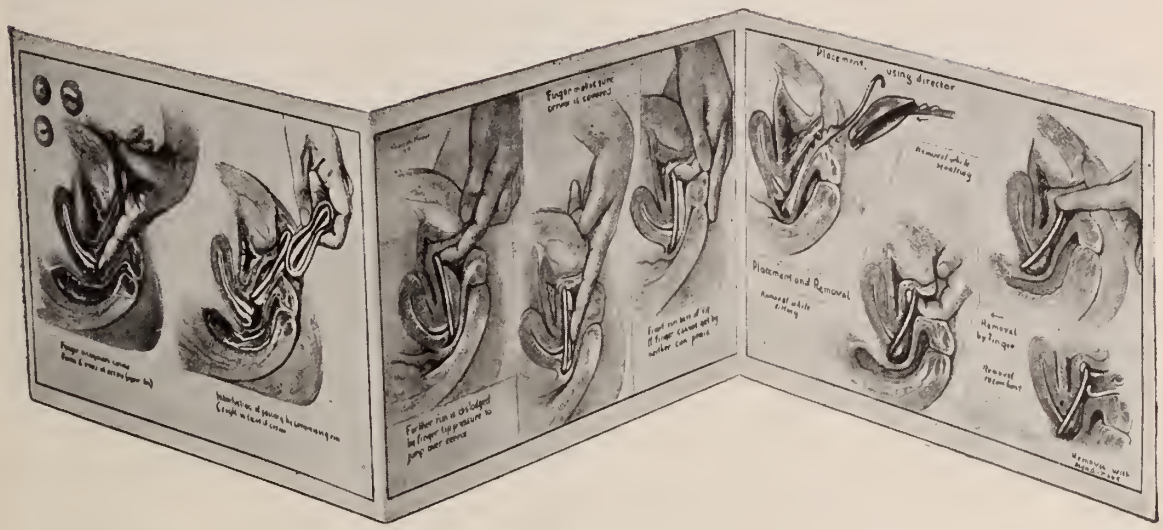
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active labor within five minutes following the initial dose. Episiotomy and outlet forceps, and repair of the episiotomy has been without pain. The average duration of anesthesia has ranged from four and three-quarters to thirteen hours.

One patient described was having eclamptic convulsions when admitted, with blood pressure 220/110. After the initial dose of 'Metycaine' was given, the pressure declined to 140/90 and the clinical picture improved remarkably. The anesthetic was continued throughout the day without the blood pressure exceeding 150. She delivered a healthy baby spontaneously thirteen hours after the initial dose.

SQUIBB PUTTING ENTIRE LINE OF DRY PACKS IN "WAR-TIME CONSERVATION CONTAINERS"

To save several million pounds a year of war-needed metals, E. R. Squibb & Sons, New York, are now redressing their entire line of dry packs in cardboard packages. Already Squibb Epsom Salt and Squibb Sodium Bicarbonate are on dealers' shelves and in consumers' medicine cabinets in the new containers, and the rest of the products are coming on the market as fast as the laboratories can turn them out. Across the top of each package is a sealing band which reads: "War-time Conservation Container—The Priceless Ingredient of Every Product Is the Honor and Integrity of Its Maker."

In appearance, the new containers are almost identical with the former metal ones. Same colors, same label, same design. Made of especially treated paper, they are lined with chipboard and the product itself is sealed in a waxpaper or cellophane bag. This arrangement makes the packages dirt-proof, moisture and vapor resistant, and gives protection against light and heat.

Light in weight, yet sturdy, the new Squibb containers are easy to handle both in the store and in the home, and some consumers have already reported them much easier to open than many of the pre-war metal ones which were sometimes a hazard to fingernails and fingertips.

There will be no change in price in the redressed items, Squibb states, in spite of the fact that in some cases the new containers cost more to produce than the former metal ones.

AO WORKERS SALUTED

In honor of their invaluable contributions to the war effort, employees of American Optical Company and its scientific instrument division, Spencer Lens Company of Buffalo, N. Y., were saluted over radio station WOR, New York, on Wednesday morning, November 4, at 5:05 to 5:30 A.M.

Directed by Jerry Lawrence, well-known radio performer, and sponsored by the National Association of Manufacturers, the program was entitled, "Music To Work By." It consisted of recorded music interspersed with announcements referring to plants engaged in war production in the area served by WOR.

The morning of November 4 was reserved for a salute to AO. Included in the script were the following announcements:

"'MUSIC TO WORK BY' this morning salutes the American Optical Company of Southbridge, Mass., its branches in principal cities of the United States and Canada, and its scientific instrument division, Spencer Lens Company of Buffalo, where thousands of expert optical craftsmen are busily producing vital military optical equipment needed by our Army and Navy . . .

"You have just heard 'Music to Work By' which saluted the workers of the American Optical Company who are working night and day manufacturing precision optical products to protect and sharpen the eyes of Uncle Sam's soldiers, sailors and fliers—and to guard the eyesight of workers producing munitions of war for them."

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DUVAL COUNTY AUXILIARY

The Woman's Auxiliary to the Duval County Medical Society held its Fall meeting at the home of Mrs. B. A. Chapman, 1863 River Road, on Thursday afternoon, October 1. Mrs. S. M. Copeland, Mrs. H. F. Horne and Mrs. C. W. Johnston served as co-hostesses.

Dr. Henry Hanson, State Health Officer, who recently returned from South America where he served as advisor to the governments of Peru, Bolivia, Equador and other countries, gave an interesting talk on "South American Plagues."

The president, Mrs. J. W. Hayes, extended greetings and a cordial welcome to the wives of doctors in the service.

The Auxiliary voted a contribution to the W. P. A. Nursery, upon recommendation of the Philanthropic Chairman, Mrs. John H. Mitchell. Plans were made for a supper to be given for service men at the WJAX recreation center. The supper will be under the direction of Mrs. Charles Henley and her committee.

Reports from other chairmen indicate an active program for the coming year. Officers of the Auxiliary are: president, Mrs. J. W. Hayes; vice-president, Mrs. E. W. Veal; secretary, Mrs. L. M. Wachtel; treasurer, Mrs. G. H. Ira.

Committee chairmen: social, Mrs. V. A. Hughes; philanthropic, Mrs. J. H. Mitchell; legislation, Mrs. L. Y. Dyrenforth; exhibit, Mrs. John F. Lovejoy; Bulletin, Mrs. John Owens; Hygeia, Mrs. A. F. Caraway; public relations,

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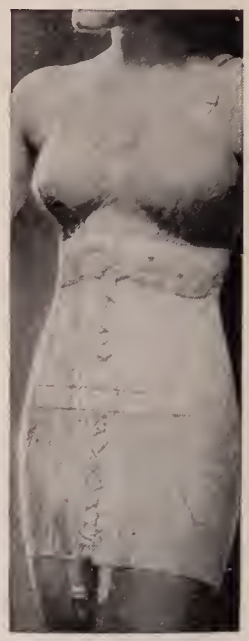
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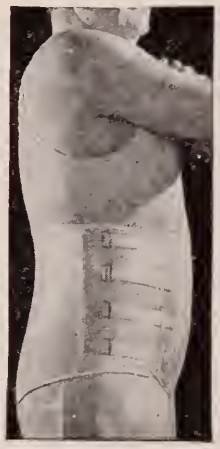
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In this, a war year, the fullest cooperation of all members is necessary in order to further the plans and program of the Auxiliary. Following the business meeting refreshments were served by the hostess committee and a pleasant social hour was enjoyed.

BOOKS RECEIVED

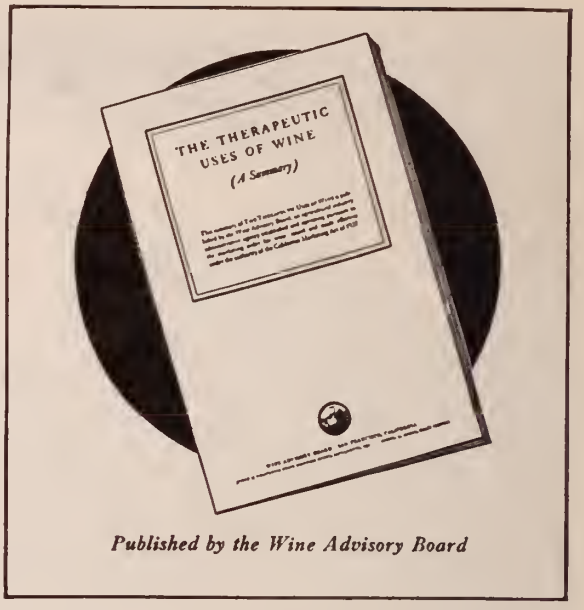
Acknowledgment of books received will be made in this column and this will be deemed by us a full compensation to those sending them. A selection will be made for review as expedient.

DOCTORS OF THE MIND. By Marie Beynon Ray. Less than seventy years ago one of the great surgeons said tbat the brain "will forever be shut from the intrusion of the wise and humane surgeon." Today, Marie Beynon Ray writes of the men who dared encroacb upon the forbidden ground of the mind and who brought to medicine a new science of healing and a new life to many thousands once doomed to a life of mental suffering. Mrs. Ray is the author of "Two Lifetimes in One." With a pen as incisive as a surgeon's scalpel she brings into dramatic relief the battles of the pioneers of psychiatry as they worked with infinite caution in the shadowy caverns of the human mind. Cloth. Price $3.00. Pp. 335. Boston: Little, Brown and Company, 1942.

WAR MEDICINE. Edited by Winfield Scott Pugh, M.D., Commander, U.S.N. Retired. This book is a symposium covering three general headings: surgery, aviation and naval medicine, and general medicine. Cloth. Price, $7.50. Pp. 565, with illustrations. New York: Philosophical Library, Inc., 1942.

CENTRAL AUTONOMIC REGULATIONS IN HEALTH AND DISEASE. By Heymen R. Miller, M.D., Associate Attending Pbysician, Montefiore Hospital, New York. Some of the stimulating problems treated in this work: Central influence on sugar metabolism, obesity and urea regulation; clinical application. Mechanism of sleep and clinical import. Renal and central factors in edema, diabetes insipidus and otber forms of polyuria. Central controls of reproduction and of other endocrine functions. The simulations of cardiorespiratory and abdominal disease; the difficulties in diagnosing these conditions analyzed on the basis of autonomic functions. Brain tumors masquerading as acute appendicitis. Cardiac pain and the theory of anoxemia in relation to the autonomic nervous system. The pharmacodynamics of the autonomic nervous system. The anatomy of the hypothalamus and its fiber connections. The "centers" in the cortex, hypothalamus, midbrain, medulla and pons and tbeir influence on various systems of the body in health and disease. Cloth. Price, $5.50. Pp. 440, with 64 illustrations. New York: Grune and Stratton, Inc., 1942.

THE MIND AND ITS DISORDERS. By James N. Brawner, M.D., Medical Superintendent, Brawner's Sanitarium, Smyrna, Ga. Part I is devoted to a brief description of mental reactions as related to cerebral functions. Part II is devoted to the etiology, symptomatology and treatment of tbe psycboses. The grouping of these disorders is simple and corresponds to some extent with that recommended by the American Psychiatric Association. In Part III will be found a brief description of the neuroses and psychoneuroses. In Part IV is given a brief description of related subjects. Fabrikoid. Price, $3.50. Pp. 228, with illustrations. Atlanta, Ga.: Walter W. Brown Publisbing Company, 1942.



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ida Medical Association	Gilbert S. Osincup, Orlando	Shaler Richardson, Jacksonville	To Be Announced
ida Medical Districts:			
—Northwest	Courtland D. Whitaker, Marianna	Stewart Thompson, Jacksonville	Tallahassee, Postponed
—Northeast	L. Y. Dyrenforth, Jacksonville	" " "	Ocala, Postponed
—Southwest	Edgar Watson, Lakeland	" " "	Sarasota, Postponed
—Southeast	William Y. Sayad, W. Palm Beach	" " "	Miami, Postponed
ıama Medical Association	H. B. Searcy, Tuscaloosa	D. L. Cannon, Montgomery	Birmingham, Apr. 20-22, 1943
rgia, Medical Assn. of	James A. Redfearn, Albany	E. D. Shanks, Atlanta	Atlanta, May 11-14, 1943
ida—			
ction, Am. College Phys.	R. H. Knowlton, St. Petersburg	Kenneth Phillips, Miami	To Be Announced
ental Society, State	I. W. Shields, Miami	W. P. Wood, Jr., Tampa	Tampa, Nov. 9-11, 1942
erm. and Syph., Soc. of	Wiley M. Sams, Miami	Lauren M. Sompayrac, Jacksonville	To Be Announced
ast Coast Medical Association	T. C. Kenaston, Cocoa	I. M. Hay, Melbourne	Melbourne, 1942
ospital Association	Mr. Ernest G. McKay, Tampa	Mr. R. L. Martin, St. Petersburg	Tampa—Postponed
dustrial Surgeons, Assn. of	Frank D. Gray, Orlando	Richard H. Walker, Orlando	To Be Announced
edical Postgraduate Course	Turner Z. Cason, Jacksonville	Chairman	
ırses Association, State	Mrs. Ann Thompkins, Leesburg	Miss Madalie Hazel, St. Petersburg	
ohthal. & Otol., Soc. of	Shaler Richardson, Jacksonville	C. E. Dunaway, Miami	To Be Announced
thological Society	L. Y. Dyrenforth, Jacksonville	Iva C. Youmans, Miami	To Be Announced
diatric Society	Ludo von Meysenbug, Daytona B.	Robert Blessing, Ft. Lauderdale	To Be Announced
ıarmaceutical Association, State	Mr. Emmett L. Brown, Palatka	Mr. R. Q. Richards, Ft. Myers	
ıblic Health Association	W. H. Pickett, Jacksonville	Lloyd N. Harlow, Jacksonville	Miami, Dec. 7, 8, 9, 1942
ıdiological Society	John N. Moore, Ocala	Walter A. Weed, Orlando	To Be Announced
ilway Surgeons' Association	Frank D. Gray, Orlando	W. C. Page, Cocoa	To Be Announced
ıberculosis & Health Assn.	Mr. E. M. Newald, Orlando	Mrs. C. R. Whitaker, Eustis	To Be Announced
tahoochee Valley Med. Assn.	Herbert E. White, St. Augustine	Robert B. McIver, Jacksonville	Postponed
t Coast Clinical Society	G. G. Oswalt, Mobile, Ala.	C. L. Rutherford, Mobile, Ala.	Mobile, 1942
Sec., Am. Cong. Phys. Ther.	John J. McGuire, Pensacola	Kenneth Phillips, Miami	
heastern Surgical Congress	Alton Ochsner, New Orleans	B. T. Beasley, Atlanta	Postponed
hern Medical Association	M. Pinson Neal, Columbia, Mo.	Mr. C. P. Loranz, Birmingham	Richmond, November 10-12, 1942
ınnee River Medical Society	L. J. Arnold, Jr., Lake City	T. H. Bates, Lake City	Lake City, Dec. 1942

COMPONENT SOCIETIES BY DISTRICTS

	SOCIETY	PRESIDENT	SECRETARY	MEETING DATE	MEMBERS Total	MEMBERS Paid	COUNCILOR
A	Bay	J. Powell Adams, M.D. Panama City	J. O. Barfield, M.D. County Health Unit Panama City		11	10	
	Escambia *Santa Rosa	M. W. Dodson, M.D. 309 Brent Bldg. Pensacola	Alvyn W. White, M.D. 24 W. Chase St. Pensacola	2nd Tuesday 8:00 P.M.	52	51	A-1-43 C. D. Whitaker, M.D. Marianna
	Franklin-Gulf	Thos. Meriwether, M.D. Wewahitchka	J. R. Norton, M.D. Port St. Joe	3rd Tuesday Odd Months	5	4	
	Jackson *Calhoun	W. R. Wandeck, M.D. Marianna	R. N. Joyner, M.D. Marianna	2nd Tuesday 7:30 P.M.	12	100%	
	Walton-Okaloosa	A. G. Williams, M.D. Lakewood	R. B. Spires, M.D. DeFuniak Springs	3rd Thursday 8:00 P.M.	6	100%	
	Washington-Holmes	N. J. Dawkins, M.D. Vernon	B. W. Dalton, M.D. Vernon		6	100%	
	Columbia *Baker, Hamilton	Harry S. Howell, M.D. Blanche Hotel Annex Lake City	Thomas H. Bates, M.D. Blanche Hotel Annex Lake City	1st Monday 7:30 P.M.	11	100%	A-2-44 William D. Rogers, M.D. Chattahoochee
	Leon-Gadsden-Liberty-Wakulla-Jefferson	G. H. Garmany, M.D. Midyette-Moor Bldg. Tallahassee	B. A. Wilkinson, M.D. Telephone Bldg. Tallahassee	Quarterly 3:00 P.M.	40	39	
	Madison-Suwannee	Eustace Long, M.D. Madison	E. D. Thorpe, M.D. Madison		8	100%	
	Taylor *Dixie, Lafayette	J. C. Ellis, M.D. Perry	Chas. A. O'Quinn, M.D. Perry	Last Friday 8:00 P.M.	5	100%	
B	Alachua *Bradford, Gilchrist, Union	R. E. Summitt, M.D. 122 No. Pleasant St. Gainesville	Chester F. Ahmann, M.D. 1043 W. Masonic Gainesville	2nd Wednesday 7:30 P.M.	29	24	
	Duval *Clay, Nassau	Ernest B. Milam, M.D. 508 Greenleaf Bldg. Jacksonville	T. Z. Cason, M.D., *Acting* 2033 Riverside Ave. Jacksonville	1st Tuesday 8:15 P.M.	191	100%	B-3-43 L. Y. Dyrenforth, M.D. Jacksonville
	Marion *Levy	B. S. Stutts, M.D. Anderson Bldg. Dunnellon	T. Hartley Davis, M.D. 202 Commercial Bank Ocala	3rd Thursday 12:30 P.M.	29	28	
	Putnam	J. Worth Brantley, M.D. Grandin	C. M. Knight, M.D. Palatka	2nd Tuesday Even Months 7:00 P.M.	10	100%	
	St. Johns	W. D. Webb, M.D. 220 St. George St. St. Augustine	Charles C. Grace, M.D. East Coast Hospital St. Augustine	3rd Tuesday 8:30 P.M.	12	100%	
	Brevard	G. T. von Colditz, M.D. Route 1 Cocoa	I. K. Hicks, M.D. Melbourne	3rd Wednesday	11	100%	
	Lake *Sumter	H. S. Cherry, M.D. Center Hill	R. H. Williams, M.D. County Health Unit, Eustis	1st Thursday 12:30 P.M.	20	19	B-4-44 Meredith Mallory, M.D. Orlando
	Orange *Osceola	Spencer A. Folsom, M.D. 319 Exchange Bldg. Orlando	R. D. Thompson, M.D. State Sanatorium Orlando	3rd Wednesday 8:30 P.M.	89	85	
	Seminole	C. L. Park, M.D. 515 1st Nat. Bank Bldg. Sanford	Leland H. Dame, M.D. Co. Health Unit Sanford	2nd Monday 7:00 P.M.	12	100%	
	Volusia *Flagler	W. C. Pay, M.D. 221 W. Rich Ave. DeLand	R. L. Miller, M.D. 258½ S. Beach St. Daytona Beach	2nd Tuesday 7:30 P.M.	46	43	
C	Hillsborough	B. W. Lowry, M.D. 1019 Citizens Bldg. Tampa	James S. Grable, M.D. 811 Citizens Bldg. Tampa	1st Tuesday 8:00 P.M.	105	102	
	Manatee	L. W. Blake, M.D. Bradenton	M. M. Harrison, M.D. Professional Bldg. Bradenton	3rd Tuesday 7:00 P.M.	14	100%	C-5-44 Leland F. Carlton, M.D. Tampa
	Pasco-Hernando-Citrus	J. T. Bradshaw, M.D. San Antonio	G. R. Creekmore, M.D. Brooksville	2nd Thursday 7:00 P.M.	13	100%	
	Pinellas	W. C. McConnell, M.D. 313 First Federal Bldg. St. Petersburg	Annette M. Feaster, M.D 166 Fourth Ave. N. E. St. Petersburg	1st and 3rd Fridays 6:30 P.M.	106	100%	
	Sarasota	O. H. Cribbens, M.D. 138 N. Link Sarasota	A. O. Morton, M.D. Commercial Court Sarasota	2nd Tuesday 8:30 P.M.	18	15	
	DeSoto-Hardee-Highlands-Charlotte-Glades	M. C. Kayton, M.D. Wauchula	C. H. Kirkpatrick, M.D. Box 454 Arcadia	2nd Tuesday 8:00 P.M.	20	100%	
	Lee *Collier, Hendry	H. Quillian Jones, M.D. 18 Leon Bldg. Fort Myers	W. H. Grace, M.D. Box 907 Fort Myers	3rd Tuesday 7:30 P.M.	17	100%	C-6-43 Edgar Watson, M.D. Lakeland
	Polk	J. R. Boulware, M.D. Box 367 Lakeland	Edgar Watson, M.D. Box 1021 Lakeland	2nd Wednesday 1:00 P.M.	59	58	
D	Palm Beach	O. B. Hazen, M.D. Comeau Bldg. W. Palm Beach	D. W. Martin, M.D. 618 Comeau Bldg. W. Palm Beach	4th Monday 8:00 P.M.	69	100%	D-7-43 William Y. Sayad, M.D. West Palm Beach
	St. Lucie-Okeechobee-Indian River-Martin	R. C. Boothe, M.D. Box 408 Ft. Pierce	Adrian M. Sample, M.D. Box 176 Ft. Pierce	3rd Thursday 8:00 P.M.	18	100%	
	Broward	Elbert McLaury, M.D. 210 Hollywood Bk. Bldg. Hollywood	O. C. Brown, M.D. 915 Sweet Bldg. Fort Lauderdale	4th Wednesday 8:00 P.M.	41	100%	D-8-44 Elbert McLaury, M.D. Hollywood
	Dade	Thomas O. Otto, M.D. 515 E. Dilido Dr. Miami Beach	Wiley M. Sams, M.D. 305 Ingraham Bldg. Miami	1st Tuesday 8:30 P.M.	343	320	
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[1]*Fauley, G. B.; Freeman, S.; Ivy, A. C.; Atkinson, A. J., and Wigodsky, H. S.: Aluminum Phosphate in the Therapy of Peptic Ulcer, Arch. Int. Med. 67: 563-578 (March) 1941.* *Reg. U. S. Pat. Off.



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The JOURNAL of the Florida Medical Association, Inc.

Vol. XXIX DECEMBER, 1942 No. 6

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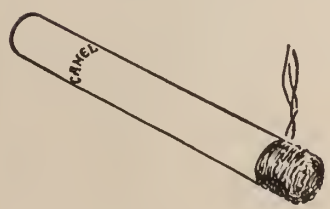
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Brückner, H.—Die Biochemie des Tabaks, 1936
The Military Surgeon, Vol. 89, No. 1, p. 5. July, 1941

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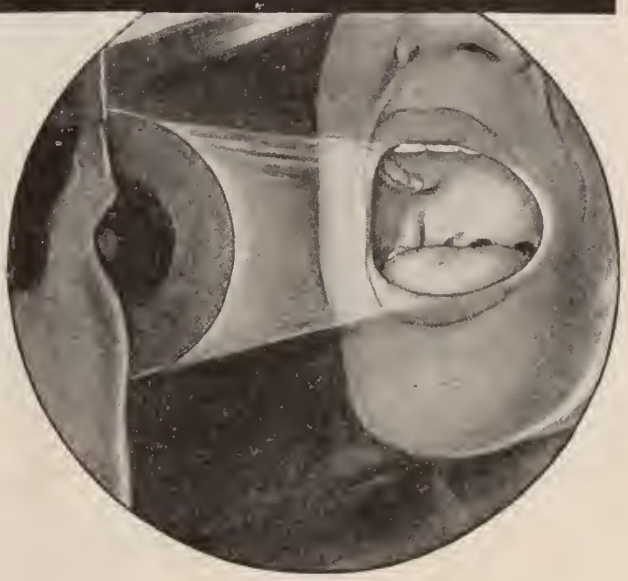
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PERFORATING PEPTIC ULCER

EXPERIENCES AT DUVAL COUNTY HOSPITAL

MARTIN MANGELS, JR., M. D.
AND
EDWARD JELKS, M. D.
JACKSONVILLE

Acute perforation of a peptic ulcer is frequently the underlying pathologic change associated with an acute surgical condition within the abdomen. Since this complication is usually diagnosed and treated according to well known and accepted methods, it is not the intention in this paper to attempt a presentation of new facts or principles. The experience gained by handling cases of perforating peptic ulcer over a period of seven years is presented in the hope of emphasizing certain accepted ideas.

Until July 1, 1938, the Duval County Hospital had been operated with a two year rotating service of interns. On that date a resident system of house officers was instituted. This paper presents primarily a comparison of the management of perforating peptic ulcer during two consecutive three and one-half year periods, the earlier period under the two year rotating internship and the later one under the resident system. During each period the diagnosis in the series of cases presented was confirmed at operation or on postmortem examination.

During the seven year period from Jan. 1, 1935, to Jan. 1, 1942, 254 cases were admitted to the wards of the hospital with a diagnosis of peptic ulcer. Sixty-two cases, or 24 per cent of the total number, were admitted because of acute perforation. The perforations were confined to men, of whom 33 were white and 29 were negroes. In all but 7 cases a history of symptoms suggestive of peptic ulceration was obtained, the frequency of their occurrence lending support to the general contention that perforation is more commonly encountered in cases of chronic ulcer than in those in which the condition is acute.

A correct preoperative diagnosis was made in all but 6 cases (fig. 1). Other conditions often

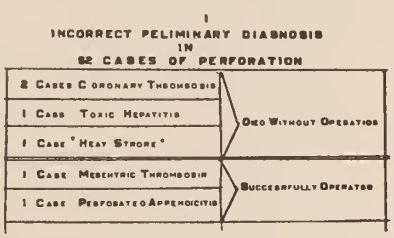


Figure 1

confused with perforation are acute pancreatitis, acute cholecystitis, tabetic crisis and acute lead poisoning.

Although it is true that a correct diagnosis cannot always be made on the basis of any particular clinical observation, roentgen evidence of pneumoperitoneum is almost pathognomonic. In 20 of the 31 cases in which roentgen examination was made, air was demonstrated beneath the diaphragm on the right side. As a means of increasing this incidence, it is suggested that the contents of the stomach be aspirated and that from 20 to 30 cc. of air be introduced through the tube into the stomach. This procedure might be of aid in instances when other clinical findings are equivocal. Subdiaphragmatic air is more commonly noted in gastric than in duodenal perforation. In 26 cases of this series perforation occurred in the first portion of the duodenum, in 15 it was gastric in origin, and in 21 it occurred at the pyloris. In all of the cases the site of the perforation was the anterior wall. The incidence of this complication of peptic ulcer was the highest during the fourth decade of life (fig. 2).



Figure 2

The duration of the acute symptoms of perforation exerts a direct influence on the mortality rate, and experience teaches that it is the prime factor in prognosis in any particular case. This

From the Department of Surgery, Duval County Hospital, Jacksonville.
Read before the Sixty-ninth Annual Meeting of the Florida Medical Association, held at Hollywood, April 13, 14 and 15, 1942.

fact cannot be too strongly emphasized. The graph shown in figure 3 illustrates the relation-

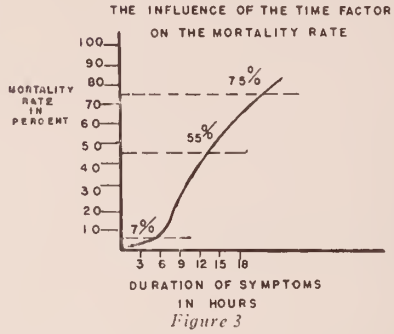


Figure 3

ship. It might even be stated that the time of operation is of greater importance than the type of operation performed, so long as the operation closes the perforation.

The age of the patient apparently exerts little influence on the mortality rate in cases of perforation (fig. 4). This observation is in contradistinc-

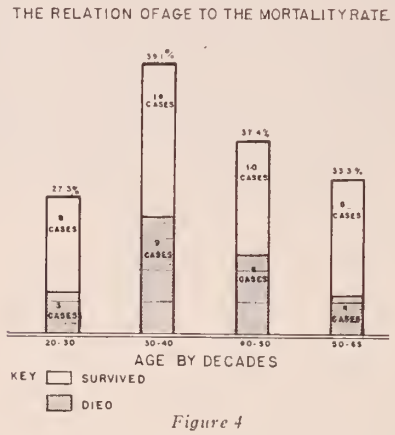


Figure 4

tion to the experience in cases of massive hemorrhage complicating peptic ulcer for in those cases the mortality rate increases appreciably with the patient's age.

With proper treatment, in approximately 90 per cent of the cases the patient recovers if operated upon within seven hours after the onset of the acute symptoms; when from eight to fifteen hours have elapsed before operation, the prognosis is on a basis of 50 per cent; and after sixteen hours the prognosis with any form of treatment is extremely discouraging. In 22 of the 62 cases of this series the patient succumbed; the gross mortality rate for the seven years was 36.5 per cent (fig. 5). During the earlier three and one-half year period the rate of mortality was 42 per cent in 26 cases. In the later period of like duration it was 31 per cent in 36 cases (fig. 6).

ANALYSIS OF 62 CASES OF PERFORATION
WITH GROSS MORTALITY OF 36.5 %

DURATION OF SYMPTOMS	RECOVERED		DIED		TOTALS
	CASES	PERCENT	CASES	PERCENT	
1-7 HOURS	29	93 %	2 ‡	7 %	31
8-15 HOURS	8	45 %	10 ★	55 %	18
16+ HOURS	3†	23 %	10 ★	77 %	13

& 51 YRS OLD ♂ 4 HRS HISTORY, DIED 2 HRS POST-OP, CORONARY OCCLUSION
* 43 YRS OLD ♀ 2 HRS HISTORY, DIED 1 HOUR POST-OP, MULTIPLE LIVER ABSCESSES.
† 45 YRS OLD ♂ 31 HRS HISTORY, PERFORATION SPONTANEOUSLY HEALED
43 YRS OLD ♀ 72 HRS HISTORY, PERFORATION SPONTANEOUSLY HEALED
38 YRS OLD ♂ 6 HRS HISTORY, PERFORATION SPONTANEOUSLY HEALED
★ GENERALIZED PERITONITIS

Figure 5

ANALYSIS OF 62 CASES OF PERFORATION
DIVIDED INTO TWO 3½ YEAR PERIODS.
JAN. 1, 1935 - JULY 1, 1938 — 42% MORTALITY IN 26 CASES
JULY 1, 1938 - JAN. 1942 — 31% MORTALITY IN 36 CASES

DURATION OF SYMPTOMS	RECOVERED		DIED		TOTAL
	CASES	%	CASES	%	
1-7 HOURS	10	90%	1 &	10%	11
8-15 HOURS	5 *	50%	5 **	50%	10
16+ HOURS	5 †	55½%	4 #	44½%	9

DURATION OF SYMPTOMS	RECOVERED		DIED		TOTAL
	CASES	%	CASES	%	
1-7 HOURS	19	95%	1 &	5%	20
8-15 HOURS	8 *	44%	7 **	56%	15
16+ HOURS	3 †	66⅔%	2 #	33⅓%	5

& WOUNDS DISRUPTION POSTOPERATIVELY
† PERFORATION SPONTANEOUSLY SEALED
CORONARY OCCLUSION POST-OP
** MULTIPLE LIVER ABSCESSES

Figure 6

Surely the significant reason for improvement, as shown in the statistics relating to mortality, is the fact that twice as many patients were operated upon within the first seven hours of acute illness during the later period as during the earlier period. This difference cannot altogether be attributed to a tendency on the part of the patients to present themselves at the hospital at an earlier stage of the illness. A review of the records shows that under the resident system the time elapsing in the hospital between admission of the patient and the performance of the operation has been greatly reduced. Formerly, in many cases the patient underwent a period of observation to await the appearance of generalized abdominal rigidity before the diagnosis was made. Frequently additional vital time was lost awaiting the arrival of an attending surgeon to confirm the diagnosis and to perform the operation. Under the resident system, in many cases the disease was recognized within the first several hours after the onset, and authority was often given the resident surgeon to operate immediately before the attending surgeon could arrive at the hospital. Thus, in numerous cases that might formerly have come within the favorable seven hour period except for delay after the patient's admission to the hospital, the patient is now saved by prompt recognition of the pathologic condition and immediate operation. The records show the average

time elapsing between admission of the patient and performance of the operation in the earlier period was three hours and fifteen minutes, whereas in the later period and at present usually less than one hour is lost before the operation is begun. The reduction in the mortality is at least in part, therefore, due to the institution of a resident system.

Simple closure of the perforation was employed in all instances, and in 5 cases posterior gastroenterostomy was concomitantly performed. In only 1 of these 5 cases was the operation performed during the later period. The incidence of postoperative wound disruption decreased greatly after the use of intraperitoneal drains was discarded and the wound of the abdominal wall was irrigated thoroughly with warm normal saline following closure of the peritoneum. During the first period intraperitoneal drains were used in 7 of the 26 cases. In 5 of these cases disruption of the wound occurred, and 3 of them terminated fatally. Disruption occurred in only 2 of the 19 cases in which such drainage was not employed. In other words, the incidence of disruption was 72 per cent in cases in which intraperitoneal drains were placed, as opposed to an incidence of 11 per cent when such drainage was not instituted. During the more recent of the two periods intraperitoneal drainage was employed in 2 cases without mishap, and only 1 case of disruption occurred.

The employment of retention sutures had little effect on the prevention of disruption. The closure of the anterior fascia recta with well placed interrupted sutures was, however, preferable to one continuous suture in this layer.

The majority of the operations were performed under general inhalation anesthesia. In those cases in which spinal anesthesia was employed, the patient responded well. In the current literature much emphasis is being placed upon the preference for this type of anesthesia because of the apparent decrease in postoperative pulmonary complications, which are always relatively high in all forms of surgery of the upper part of the abdomen.

The postoperative period of hospitalization averaged twenty-eight and four tenths days during the earlier period. During the later period the length of time required for convalescence in the hospital was decreased to eighteen and one tenth days. This decrease represents a saving of ten days both to the patient and to the taxpayers of the county, who support the hospital. The shorter period of convalescence is attributed to earlier operation, the performance of fewer multiple procedures at the time of operation, the routine use of the Levin tube with constant gastric suction postoperatively, the discarding of intraperitoneal drains and the great reduction in the incidence of postoperative wound disruption.

DISCUSSION

When a diagnosis of acute perforation of a peptic ulcer is made, the indication for immediate surgical intervention exists, with but one exception. It is apparent that in 90 per cent of the cases of this series the patient survived when operated on within the first seven hours and that after sixteen to eighteen hours the rate of survival was only 25 per cent. In the cases of more than sixteen hours' duration with survival a perforation which had spontaneously been sealed by omentum was invariably encountered, and suture of the perforation was unnecessary. At this stage an already generalized spread of peritonitis had ensued, and the damage had already been wrought; the suture of an open perforation did not save a single patient. The introduction of peritoneal drains did not satisfactorily combat the peritonitis, and the intraperitoneal instillation of sulfanilamide powder appeared to be without benefit in these cases in which the source of contamination arose so high in the gastrointestinal tract. The patients that survive will survive without surgery; either nature localizes the peritonitis with subsequent formation of a local abscess, or spontaneous sealing off by omentum occurs. In this group, therefore, surgical intervention is contraindicated. In few other abdominal emergencies does the element of time influence the ultimate outcome to such a profound degree.

The routine passage of a stomach tube preoperatively and the aspiration of the gastric contents are a desirable procedure. Emptying the stomach by this means does not, however, alter the fact that immediate surgical intervention is imperative. The institution of gastric suction does not justify postponement of the operation. It is merely an adjunct that in no way alters the indications for surgery. Continuation of gastric suction during the early postoperative period practically eliminates visceral distention and it decreases the tension at the site of perforation.

Improvement in the mortality figures is more

dependent upon early operation than upon a search for new surgical technics. Since acute perforation represents a dire emergency, the operative procedure should be designed to close the perforation with minimal attendant trauma to the patient. Simple suture with Lembert sutures and the drawing of a fat pad over the site constitute the procedure of choice. When induration is extensive and the placing of sutures across the perforation is impracticable, the tacking of a fat pad is sufficient. Biopsy of the margin of the ulcer is an unwarranted added risk to the patient.

Surgery in addition to simple closure is rarely justified. Gastroenterostomy is indicated only if concomitant obstruction exists. Routine performance of gastroenterostomy prolongs the operative procedure. Also, its performance should presuppose a study of the patient's gastric physiology. This obviously cannot be made in cases of acute perforation. A gastroenterostomy unwisely performed upon a patient with high gastric acidity frequently leads to subsequent formation of anastomotic ulcers. To the past belong the days when gastroenterostomy was the routine and practically the only surgical treatment for peptic ulcer. In certain hands resection of the ulcer and pyloroplasty give good results if the ulcer is on the anterior wall of the pylorus. As a procedure to be recommended for general use, however, simple suture is the one of choice. The operation for acute perforation is designed to save a life, not to cure the patient of ulcer. Curative surgery should therefore be deferred.

Emotional stress and strain have long been regarded as a factor in the causation and activation of peptic ulcer. Reports already appear in the literature from England associating episodes of acute perforation with bombing raids and the stress of war. Now that the soldiers and the civilian population of this country are to be subjected to similar experiences, an increase in the incidence of acute perforation in both civilian and military practice may be witnessed. May the lessons that past experience has taught stand the surgeon in good stead, should the need arise.

CONCLUSIONS

The prime factor influencing the mortality rate in acute perforation of a peptic ulcer is the duration of the acute symptoms. Early operation is of even greater importance than the type of operative procedure performed, so long as the perforation is closed.

With the institution of a resident system of house officers at the Duval County Hospital, immediate operation in cases of acute perforation has been made possible with the result that the mortality rate has decreased from 42 to 31 per cent, and the average period of hospitalization has been reduced from twenty-eight and four tenths days to eighteen and one tenth days.

DISCUSSION

DR. HARRISON A. WALKER, Miami Beach: I consider it a privilege and an honor to have been asked to discuss this timely paper, which has been so well presented. I can only emphasize the salient facts and points mentioned, instead of attempting to add anything to the subject matter.

In so doing I would first mention that in addition to the other conditions confused in diagnosis, besides the one mentioned, one must not fail to direct attention to the subphrenic and subdiaphragmatic abscess, which may be caused by the posterior gastric perforation. The mechanism taking place here is that the omentum walls off the foramen of Winslow, keeping the entire content in the lesser peritoneal cavity, and therefore no generalized symptoms of peritonitis occur. I had 2 such cases in fairly close succession. One of them had been diagnosed, three weeks previous to the time I saw the patient, as ruptured gallbladder. The posterior perforation had naturally emptied into the lesser cavity and had become walled up as an abscess. In operating all that could be done was to go in and drain. The patient one week later was drowned in his own secretion by perforation of the diaphragm into the lungs. In another similar case the patient was saved partly, I think, by the experience with the previous case.

The second point of emphasis is the importance of the information obtained by roentgen examination of pneumoperitoneum as being pathognomonic. This is an important factor, especially with the roentgenogram taken with the patient in the upright position if possible. It shows the air spaces under the diaphragm, and if the stomach has been aspirated, there will be no mistaking these air spaces when seen. If it is not possible to place the patient in the upright position, of course a roentgenogram taken with the patient in a lateral position will show the air spaces.

The third point is the one I consider the most salient one of them all. This paper was intended to stress the definite proportional ratio of length of time elapsing between the time of perforation and the time of operation to the mortality rate. This point will stand, with operative conditions, as much or more so than any other operative condition.

Dr. Mangels has shown by his slides a well worked up group of cases with the proportionate ratio of the cases that have gone a certain number of hours to those that have gone a greater length of time. This could be analyzed a little more closely if desired. But without further analysis one can make a similar proportionate ratio to the cases that have gone for six hours, eight hours, ten hours or twelve hours. I do not know of any other particular group or type of cases for which one can work out so closely a proportionate ratio.

The stressing of the time of operation in preference to the type of operation is a point well taken. Many surgeons will remember the technical details relating to whether to do plastic surgery to close the perforation, or an enterostomy, but I think the point Dr. Mangels brings out that the time is much more important, as long as good technic is used, than the particular type of technic is of particular value.

I wish to thank Dr. Mangels for the timely and well presented paper.

Dr. Leland F. Carlton, Tampa: Gastric ulcer is not an uncommon condition. Perforations are not rare. Both are encountered by the general practitioner, internist and surgeon.

I believe that a paper like the one which Drs. Mangels and Jelks have presented, bearing on the common or ordinary conditions with which the surgeon has to deal, is of much more value to the profession than one bearing on the rare conditions which one may never encounter.

The underlying principles of surgery and the sane methods of handling perforations have been well presented in this paper. There are no new theories, but there is a simple technic which, when followed, will save the lives of many patients.

It is well to bear in mind that operation in an acute case of perforating gastric ulcer is only a temporary measure, a life-saving device. Radical surgery here is not only not indicated, but contraindicated. One is dealing with a potentially sick person, and the least to be done to accomplish the desired purpose the better the prognosis for the patient.

The most important factor in reducing the mortality of cases of perforating ulcer is the element of time. Perforation of from three to six hours' duration is usually corrected by minor surgical procedures, that is, closing the perforation and buffering with omental pads. After from twelve to twenty hours the death rate increases with each hour of delay unless nature has sealed the opening. In that event operation is contraindicated, but the management of the case should be the same as the management of a postoperative case.

If surgeons would use more duodenal suction, infusions and transfusions with plasma or whole blood in all abdominal surgery, they would have a smaller mortality. Attempting to keep the intestines in tone and preventing distention will aid in preventing leakage at the site of the perforation, add to the comfort of the patient, prevent ileus and also help combat peritonitis, which is the gravest sequence to perforation.

Drainage will not cure peritonitis. The sulfa derivatives have an important place in the surgical field, but they are not cure-alls. I believe when possible and when they are used, one should not use drainage, but should close the wound and allow these sulfa derivatives to perform their function. Drainage in a few hours' time removes the greater amount of the drugs.

It sometimes takes nerve to close the incision without drainage, but the older I get, the less drainage I employ and the better I believe the patient gets along.

In treating cases of perforating gastric ulcer, let me impress upon the surgeon the importance of making the diagnosis early and acting accordingly.

Dr. Edward Jelks, Jacksonville: The work described by Dr. Mangels was done at the Duval County Hospital and was 100 per cent charity. The operators were surgeons of the visiting staff and residents.

When Dr. Mangels and I started this investigation, we had no idea to what conclusions it would lead us. We were curious to know what effect the resident system had upon the results we were getting in the surgical handling of cases of perforating peptic ulcer. This effect has been well brought out, I think. The study proves conclusively that the question of time is the element in the incidence of cure and the incidence of death.

This work, as I said, was not done by me. The only thing I had to do with it was to be around to see that it was done. I did not operate upon a single one of the patients in these cases. Since the new system has been put into effect, it has given us an opportunity to prove decisively the value of the early operation in cases of perforating peptic ulcer. Under the two systems, namely, rotating intern and resident, the visiting surgeons performing the operation in these cases have been the same with one exception. The social service department has had practically the same personnel. In consequence, I think we must conclude that the system is the means whereby an improvement in the results has been produced.

How are physicians in general to deal with this problem? What can you do to improve your system of handling patients with this disease in order to obtain better results? As has been stated in the discussions, there is no one practicing general medicine or surgery who does not come in contact with these patients. I know what confronts the general practitioner when he sees one of them. Sometimes it is early in the morning, perhaps as early as 3 a. m., and it takes much patience and will power to deal with the patient at so inopportune an hour. So he simply gets him ready to go to the hospital by daybreak. Now I say that with a perfectly clear conscience because it has been proved again and again that the worst place in the world for a patient to have a peptic ulcer perforate is the hospital when he is already being treated there because of some other illness. He is under treatment for pneumonia perhaps, or mental disease, or fracture and begins to complain of pain in the abdomen. The first thing the nurse does is to give a hypodermic injection. Later the house physician sees him and after a time gets the visiting physician there. But by then several very valuable hours have been wasted. So the situation resolves itself into one in which the rule is that the first person who sees a patient with a perforating peptic ulcer is the one who bears the greatest responsibility.

If I had a perforating peptic ulcer, I should much rather be placed immediately in the hands of a surgeon who is regarded as a casual operator, if he knows what he is doing, than to come after twelve hours under the care of a great specialist.

The purpose of bringing this subject before you is to refresh your minds and keep you trying, as we are, to be ready when the patient complains of sudden pain in the abdomen.

Dr. Lloyd J. Netto, West Palm Beach: There are one or two factors that I should like to bring out. I live in a relatively small place where one does not see too many of these cases. I do not think there is any question about the fact that the earlier one operates the more likely the patient is to get well. There is no argument at that point. There is no question as to technic. The less one does the better off the patient will be.

Drainage, I think most surgeons agree, is not necessary if one uses suction and gets all of the fluid out. In the early stages, if there is peritonitis, duodenal suction may be needed.

One conclusion comes to my mind from the experience with a few cases of this kind. There is not enough attention paid to postoperative treatment, and not enough cooperation exists between the surgeon and the internist. This observation may not apply in Duval County Hospital and other hospitals that have plenty of funds, but it does in smaller ones. As soon as the patient reacts from the operation, the physician goes down and says the patient is all right, but he is not always all right. A marginal ulcer may develop. Complicating conditions should be looked for from the beginning. West Palm Beach has a population of 25,000 people, and the patients are not always easily controlled. To the general practitioner patients with this disease act at home much like a patient does with pain in the lower part of the abdomen. The condition may be considered one of intestinal influenza, and the patient may be treated at home for several hours. This delay puts the surgeon at a disadvantage.

I have enjoyed this paper very much. It brings out something that is most important not only to the surgeon, but to those who are doing general practice as well.

Dr. Lester L. Whiddon, Ft. Pierce: I might apologize in advance for offering a discussion because of the paucity of my experience along this line, but I have something to report that it seems to me has helped in handling cases of this type. I know of no other condition in

which an early diagnosis is of more value. I think the importance of the time factor is recognized by most surgeons. Operative technic of course is to be carried out in a manner as nearly right as possible. I have only had a few cases, but I have not lost one, and one patient was not operated on until twenty-two hours after the perforation had occurred. The one measure that has helped the most in these cases is to keep the patient's stomach splinted. The only way to keep the stomach splinted is with some form of narcotic. I do not believe that one should give large doses, but give them often. Keep the patient narcotized. Keep the stomach splinted. The patient can be handled satisfactorily while the splinting is in effect, and the surgeon can take better care of the patient.

DR. MANGELS (concluding): I want briefly to thank the discussors for having been so lenient and for the facts that they have brought out. We appreciate very much having them come, listen to our presentation and then help by discussing the paper.

THE ROLE OF PHYSICAL MEDICINE IN NATIONAL DEFENSE AND DURING ACTIVE WARFARE

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The United States has been facing a military emergency which now has terminated in actual warfare. As in the past, military physicians will again be called upon to manage the physical welfare of the troops and they will find that "new conditions demand new technics." "Blitzkrieg," literally meaning "lightning war," will command the same attention from the medical department as is now required of the other military branches.

Sound health is sound war economics; curtailment of disability will lend security and power to any standing army. The medical attitude during this military emergency should be to grasp every established aid which will contribute to the vast health program, provided that such aids are practical in their application to active combat.

Every American physician should read a recently published article by William Beaumont[1] of London, in which he described some of the new medical conditions now appearing as the result of the war. Reactions to prolong blackout, shelter shoulder, bomb shock, multiple carbunclar abscesses and massive lesions of the face and skin due to explosion are a few of the conditions discussed. He emphasized the proved value of physical therapy in the management of these conditions and observed that the error of Britain's failure to recognize this value during peace time is lamentable since now there is poor equipment. The United States medical high command should profit by these hardships of this allied country.

THE APPLICATION OF PHYSICAL MEDICINE DURING NATIONAL EMERGENCY

Singer[2] recently reported that nearly forty million people in the United States participate in seasonal migration during one year and are subject to the physiologic effects of climatic change. It is obvious that during the period of mobilization and training of troops this number will materially increase. During the past few years physical therapists in this country have been carrying on extensive research which has revealed definite changes in physiology associated with climatic change. Europeans have paid attention to this phase of medicine for years. Personal conversations we have had with certain members of the military high command indicated that a health problem is already recognized in respect to the young selectee from the upper New England states, for example, who is transported within a few hours to the hot sands of Camp Blanding, while another is sent from Florida to the heights of Virginia or the Carolinas. Close observation of a few cases revealed a widely different reaction with respect to cutaneous pigmentation and other climatic physiologic responses.

While these problems are at present in a stage of empiricism, it behooves physicians to consider them seriously since in time of active combat they will certainly play a part that may be a vital one. There are, in addition, several well established problems which always confront the medical department during mobilization. Our main object is briefly to point out the application of physical measures to these conditions.

Venereal Diseases.—Gonorrheal infection outranks in frequency all other venereal diseases. Whether or not the practice of rigid prophylactic routine together with the use of the sulfonamide agents has solved this problem during military mobilization has not been reported. Special emphasis should be placed upon measures which will greatly decrease the time required for treatment in combating this common disabling infection. This reduction can be accomplished by utilizing fever therapy in combination with these drugs. If the simple acute stage of gonorrhea is now being controlled satisfactorily, then the question arises regarding the chronic and complicated forms including prostatitis and arthritis. Com-

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Types of Treatment	Number of Patients	Total Dose of Drug in Grains	Average Concentration in Blood, Mg. per 100 cc.		Percentage of Cures
			Before Fever Treatment	At End of Fever Treatment	
Fever alone					
8 hours at 106.6 F.	9	None	.....	.....	11.1
10 hours at 106.6 F.	11	None	.....	.....	63.6
Fever combined with chemotherapy 10 hours at 106.6 F.					
Sulfanilamide orally during 18 hours preceding fever	20	160	12	8	100
Sulfathiazole orally during 18 hours preceding fever	11	105	6	3	100

Table 1. Illustrating the comparative value between fever and fever combined with chemotherapy in acute gonorrheal infections. (After Rose, D. L., Kendell, H. W., and Simpson, W. M.: War Med. 1: 470-478 (July) 1941).

bined fever therapy and chemotherapy are probably superior to any other established treatment for these complications. Reference to table 1 reveals the startling results following one or two treatments with this combined therapy. These results, reported by Rose, Kendell and Simpson,[3] have been confirmed by numerous reliable investigators.

Nonspecific prostatitis, although technically not belonging under this caption, should at this time receive mention. Fever therapy administered by short technic with the temperature peak ranging from 102 to 103 F. for from one to one and one-half hours every second or third day will often cause these cases to clear up more rapidly than any other conventional type of therapy. Suitable chemotherapy can be used in conjunction with the fever when desired.

Syphilis.—The value of fever therapy in the treatment of late syphilis, more especially after invasion of the central nervous system, has been well established. This treatment may be of little practical application during active war. Early syphilis, on the other hand, still remains a vital military problem. The graphs shown in figures 1 and 2 reveal the great reduction in time necessary to obtain a negative serologic reaction in early syphilis by the use of chemofever therapy in contrast to chemotherapy alone. The medical profession at large has been slow in recognizing

EARLY SYPHILIS

Type	Cases	Previous Chemotherapy	Serologic Reaction before fever	Chemofever Therapy	Serologic Reaction after fever	Observation	Final Status
Seronegative Dkfld. positive	2	None	Negative	25 hours	Negative	3-5 years	No relapse
Seropositive Primary	22	12 extensive 10 none	4 plus	25-50 hours	21 negative 1 positive	3-5 years	No relapse
Seropositive Secondary Wassermann-fast	38	Extensive Sero fast	4 plus	50-75 hours	16 (42%) Neg. 22 (57%) Pos. Units—10	3-5 years	34 stationary 4 relapse
Total	62						
LATE SYPHILIS							
Paresis	12	8 inadequate 4 adequate	Blood, Spinal Fluid Positive	100 hours Minimum	All late Cases 4 Neg. Blood 6 Neg. Sp. Fl. 16 Pos. Blood or Sp. Fluid	3-5 years	9 (75%) complete remission 3 partial relapse
Tabes	6	6 adequate	6 positive	100 hours Minimum		3-5 years	2 great improvement; 4 little improvement No progression
Tertiary Gumma	2	Adequate	Positive	100 hours Minimum		3-5 years	2 rapid healing No relapse
Total	20						

Table 2. Illustrating the value of chemofever therapy in both early and late syphilis. In early cases the rapid reversal in serologic reaction and freedom from relapse are noteworthy. (Phillips, K.: Urol. & Cutan. Rev. 45: 762-768 (Dec.) 1941).

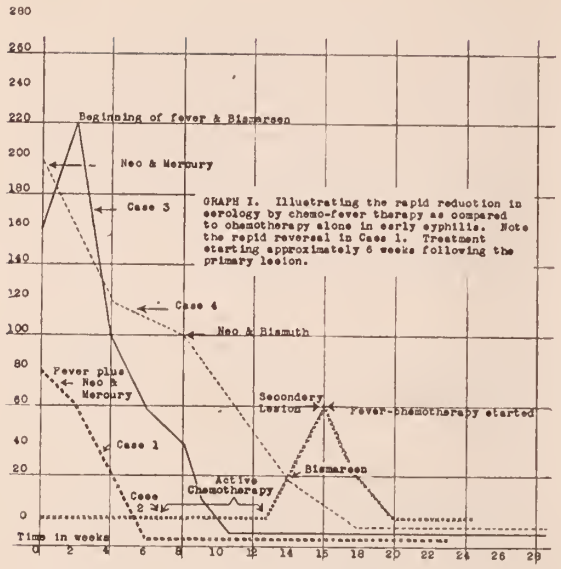


FIG. 1. *Illustrating the rapid reduction in serology by chemofever therapy as compared to chemotherapy alone in early syphilis. Note the rapid reversal in Case 1. Treatment started approximately six weeks following the primary lesion.*

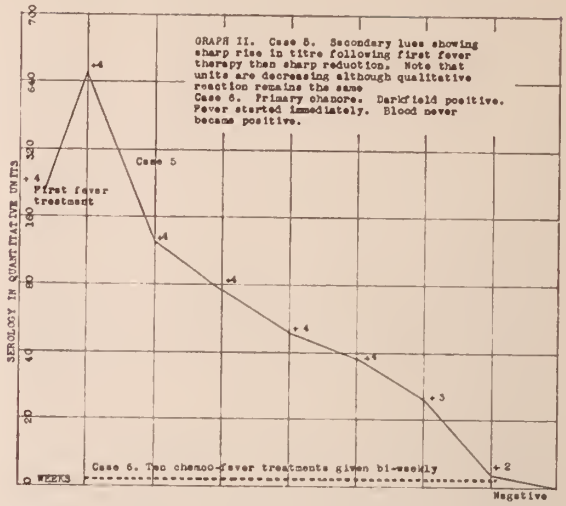


FIG. 2. *Case 5. Secondary syphilis showing rise in titer following first fever therapy, then sharp reduction. Note that units are decreasing although qualitative reaction remains the same. Case 6. Primary chancre. Dark field examination positive. Fever started immediately. Blood never became positive.*

this fact. As illustrated in table 2, in a large majority of cases this reversal remains permanent. The potential value of such a reduction in the time required for active treatment is obvious.

TECHNICAL ASPECTS OF FEVER THERAPY

The fact that distinct clinical advantages may be obtained by fever therapy would mean nothing unless the technical setup were practical in its application to military circumstances. Production of artificial fever by chemical means or by the use of foreign protein is well understood and beyond the scope of this paper; the role of chief importance here is the creation of fever by physical means. One of us (A.M.P.) by proper application of radio engineering has succeeded in developing a simplified apparatus which over a period of several years has proved to be clinically efficient in the production and maintenance of fever. In addition, the radiothermonic generator can quickly be detached and utilized either as a short wave radiothermy or, should necessity arise, it can be utilized as a military short wave code-transmitting apparatus. The unlimited practical application of such a unit in time of war is, of course, obvious. Figures 3 and 4 show the apparatus intact, which can be operated, even on ships, from the regular mains of a source of electric power usually furnished to hospital units of modern armies. Where such electric power is not available, the line circuits and plugs are so constructed that the supply may come through a generator driven by a gasoline engine. The fever unit is not cumbersome and can be transported with no more inconvenience than other portable equipment for dispensary or camp hospital. Articles have been prepared for both American[4] and British journals now in process of publication, describing in full further details regarding these and other technical aspects. They are beyond the limited scope of this brief discussion except for a somewhat detailed description of the technic of a single treatment.

Technic of Fever Treatment.—While technical skill and training are emphasized during peace time, the application of fever therapy in time of war may demand many modifications. Advantage in safety is gained by the fact that military subjects are chosen on the basis of physical fitness; this choice provides better risks than those encountered during civil life. Dr. W. B. Huntley,[5] Medical Director of the Michigan State Prison, demonstrated that prisoners can be trained to act as technicians. In times of emergency any well trained physician could apply himself and soon become capable of supervising and training a working staff in the field.

The patient is stripped of all clothing, jewelry or metal objects and placed upon the table previously prepared, as shown in figures 3 and 4. A towel or pad placed in the crotch keeps the legs separated and the scrotum suspended, and prevents concentration of heat at these areas. Insulating material above and below the patient

need not be too stereotyped. Heavy rubber sheeting both above and below is essential for reflecting the evaporated heat back toward the body; moisture thus supplied from perspiration creates a high environmental humidity. The remainder of the insulating material may be chosen from whatever is available, such as blankets, sheet blankets, terry cloth or even a latex fever bag.

Sedation is necessary only during the long fever sessions, and most any of the barbiturates given orally or opiates administered hypodermically will suffice. Fluid balance is important, and from 3,000 to 6,000 cc. should be given during a treatment, either as water or weak salt solution, the latter serving to counteract the rapid loss of chlorides.

The rectal temperature, pulse rate and respiratory rate are recorded every fifteen minutes, and any tendency toward body temperature rising too high can be controlled by turning off the generating unit and exposing the skin to the air or a fan. Should oxygen be available, its occasional administration during the long sessions adds materially to the patient's welfare; additional comfort is controlled by a fan to the head and face or ice water sponges. At the conclusion of the treatment the temperature is allowed to subside to 102 F. The patient is then placed in bed and after five hours rest can be allowed up and about his duties.

The long fever sessions utilized in the treatment of the venereal diseases are given twice weekly, the temperature being maintained at an elevation of from 105.6 to 106 F. for from four to six hours. During the short sessions applicable to other conditions, mentioned later, the temperature ranges from 102 to 104 F. for from one to two hours and may be given every second day.

ACUTE RESPIRATORY INFECTIONS

During periods of mobilization of troops and especially when they are subjected to rapid climatic and environmental changes, acute respiratory infections are certain to be prevalent. These vary from simple coryza to severe influenza and various types of pneumonia, and are not infrequently disabling to large numbers. Physical therapy offers a most valuable aid in the control of such infections. Short wave radiothermy applied locally to the chest and the upper portions of the respiratory passages or the sinuses in the milder types, and short generalized fever with the temperature elevated to 102 or 103 F. for one hour in the more severe types will be effective under these circumstances. Suitable chemotherapy may be used in conjunction, and the combination of mild fever with sulfapyridine in the treatment of early influenza, acute colds and bronchitis will often effect a dramatic and sudden termination of these maladies.



Fig. 3. *A wooden table 7 feet long and 2½ feet high. Springless mattress 3 inches thick is placed upon table. Short wave generating unit 16 to 24 meters is located at foot of table. Hairpin induction cable is now placed upon mattress. Insulation between cable and patient consists of 12 single layers of blanketing, one heavy rubber sheet and one double layer of heavy terry cloth. Patient is placed upon this. Now refer to Fig. 4.* (*Phillips, K.: Urol. & Cutan. Rev.* **45**: 762-768 [*Dec.*] 1941).



Fig. 4. *Insulation covering patient: one single layer of heavy rubber sheeting, one single cotton blanket and one heavy double blanket. Caution: Avoid all metal objects in bedding and clothes such as mattress springs, safety pins and jewelry.* (*Phillips, K.: Urol. & Cutan. Rev.* **45**: 762-768 [*Dec.*] 1941).

MUSCULAR AND JOINT SYNDROMES

Rheumatic, myositic and arthritic conditions, frequently similar in etiology to respiratory diseases, are invariably present during mass encampment of men. These disabling conditions are worse in the presence of exposure to drastic climatic and environmental changes. There are few measures which will afford quicker relief in these conditions than properly chosen physical therapy. It may be administered locally in single involvement, or as mild fever therapy when the affliction is multiple. A most valuable additional aid in the treatment of spasm of muscles and ligaments will be found in the application of small amounts of 1 per cent ointment of histamine hydrochloride to the areas prior to physical therapy.

MISCELLANEOUS MALADIES TO WHICH PHYSICAL THERAPY IS APPLICABLE

Fever therapy has been studied and reported with some favor in both amebic and bacillary dysenteries. While sufficient observation has not as yet been completed to establish its effectiveness with certainty, it could be tried in combination with sulfaguanidine should intestinal infections become manifest within a camp, especially if the apparatus were already available.

It is not beyond the realm of possibility for several miscellaneous maladies, comparatively rare in peace time, to appear sporadically during the rapid movement of troops into certain areas. The therapeutic phase of some of these conditions may be materially hastened by properly chosen physical therapy. Short sessions of fever therapy with a maximum elevation of temperature from 102 to 103 F. for one hour repeated daily will aid materially in the early stages of dengue fever, should it develop within a camp. Brucellosis has shown response to longer treatments, during which the temperature is elevated to 103 or 104 F. thrice weekly. Bronchial asthma resulting from climatic change may be benefited by similar technic.

THE APPLICATION OF PHYSICAL MEDICINE DURING ACTIVE WARFARE

Careful analysis of Beaumont's discussion[1] regarding the experience of the British medical conditions resulting from active war points the way to much applied physical therapy. Infrared radiation combined with surging galvanism is of distinct value in the management of shelter shoulder. Judicious application of ultraviolet rays to the multiple small lacerations resulting from flying glass during explosions produces a protective covering and is used extensively.

Rheumatic fibrositis, traumatic injuries, sprains and the postcorrective management of fractures are all amenable to treatment by physical measures. A peculiar type of multiple carbunclar abscesses, rarely seen in peace time and thought to be due to the sudden release by explosions of germ-laden dust which has been pent up for years, are responding to therapy by short wave diathermy. Schmitt[6] reported his results in this field.

Since the first World War contributed greatly to the birth of physical medicine on a large scale, it is expected that with suitable apparatus provided, the present military physicians and surgeons would, undoubtedly, contribute widely to the present knowledge in this field. Deep and original scientific thinking goes hand in hand with war emergencies, and commendable research invariably results.

While a consideration of the sick and wounded far behind the lines is beyond the scope of this discussion, we should, nevertheless, recognize the invaluable place of physical medicine in the rehabilitation program of afflicted war veterans. In conclusion, we quote from Beaumont[1] in this regard:

> The government [of Britain] is determined that those disabled, whether in the fighting services, the home defenses or industry, shall not be human derelicts; that these men and women shall not be condemned to a lifetime of drudgery or charity through some disability. A comprehensive plan extending the realms of physical therapy to embrace rehabilitation has been decided on.

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TUBERCULOSIS OF THE BREAST

REPORT OF A CASE

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Since the first report of tuberculosis of the breast was made by Cooper[1] in 1829, the presence of this disease has been noted, on the average, in about 1 per cent of all surgical lesions of the breast. Thomas[2] reported an incidence of 0.88 per cent of tuberculous mastitis over a period of twelve years. Berger and Mandelbaum[3] reported an incidence of 1.4 per cent in 623 cases of disease of the breast admitted to the Jewish Hospital of Brooklyn. This percentage was identical with that reported by Grimes and Massie[4] after reviewing 429 cases of lesion of the breast. Barker[5] in 1926 reported a ratio of 1 case of tuberculous mastitis to each 45 cases of malignant disease of the breast. Keeley[6] reported the presence of this disease in 0.83 per cent of all cases of mammary disease admitted to the Wisconsin General Hospital from 1924 to 1935. McGehee and Schmeisser[7] reported 8 cases observed in a series of 447 cases of disease of the breast, an incidence of 1.87 per cent. Nicolson and Gillespie[8] recently reported an incidence of 0.54 per cent at the Steiner Cancer Hospital in Atlanta. Webster[9] in 1939 noted that over 500 cases of tuberculous mastitis have been reported in the literature since 1829.

The cause of tuberculous mastitis is of course the tubercle bacillus. In all cases in which the bacillus has been isolated and identified, it has proved to be of the bovine type. Throughout the literature various writers on the subject have reported that only in about 25 per cent of cases of tuberculous mastitis has the tubercle bacillus been identified.

Tuberculous mastitis is classified as primary or secondary. When there is no demonstrable tuberculous lesion other than the lesion of the breast, the condition is attributed to infection entering through the ducts, skin wounds, or blood stream and is classified as primary tuberculosis of the breast. Secondary tuberculous mastitis is ascribed to invasion of the breast by way of the lymphatics, contiguous structures, of blood stream from a primary source of infection. The hematogenous origin of tuberculous mastitis has largely been discredited in both primary and secondary infections. Nagaskima[10] in 1925 in a report of 34 autopsies in advanced cases of tuberculosis found no tuberculous involvement of the breast.

In support of infection through the ducts by direct contact Fricke[11] reported the case of a woman with a lump in her breast which had been massaged by a tuberculous husband. Pathologic study of the tissue following radical removal of the breast demonstrated the presence of carcinoma and tuberculosis. He believed that the tuberculosis had been implanted. Smith and Mason,[12] however, in 1926 collected 18 authentic cases of combined carcinoma and tuberculosis in the same breast. Infection by way of the lymphatics and contiguous structures in cases of secondary tuberculous mastitis is agreed on by all of the writers on the subject.

The pathologic grouping based on the gross findings advocated by Berger and Mandelbaum[3] probably simplifies the various pathologic classifications of this disease. The pathologic changes may be divided into three groups.

1. The Nodular Type (discrete, disseminated and confluent.) The discrete nodular type is the most common. The usual sequence is nodule, abscess and sinus formation.

2. The Sclerosing Type. This type usually occurs in older persons and is characterized by its long duration. This allows adequate time for protective fibrosis to occur. The appearance of the breast in the terminal stage is small, hard and shrunken.

3. The Atypical Type. This type is much less frequent and may closely simulate various other types of lesion of the breast. On section, the appearance of the specimen may simulate that characteristic of chronic mastitis. Cysts and localized areas of caseation may be present.

The diagnosis of tuberculous mastitis should be suspected in persons between the ages of 20 and 50 in whom a lump has appeared with a slow, painless, insidious onset and in many instances which has gone on to abscess, rupture and sinus formation. The lesion is almost always unilateral and has a tendency to involve the right breast more often than the left. Pain and tenderness may be present, but they usually occur at a later date and are indicative of suppuration. During the stage of liquefaction necrosis, tenderness increases and fluctuation may be elicited, at which time the skin may become adherent and show signs of inflammation. When the nodule

is close to the areola, retraction of the nipple is present. The axillary lymph nodes are reported involved in from 25 to 50 per cent of cases. In from 20 to 50 per cent of the lesions a sinus or sinuses develop, which drain thin, purulent material. In many cases the tubercle bacillus may be recovered in drainage from the chronic sinuses. If active tuberculosis is present elsewhere in the body, the diagnosis of mammary tuberculosis is strengthened.

A microscopic diagnosis is essential and can be made only by the finding of typical tubercles and caseation. Smears and guinea pig inoculation should always be done to substantiate the diagnosis, even though only about 25 per cent of these tests have proved positive in otherwise proved cases of tuberculous mastitis.

Physical examination in most cases reveals no gross impairment of health.

Carcinoma may be extremely difficult to differentiate from tuberculosis of the breast. Tuberculosis, however, usually occurs in a younger person and generally runs a more acute course than carcinoma.

Roentgenograms of the breast may be of value in giving more or less general information although they cannot replace careful clinical study and examination. The presence of a tumor mass may well be demonstrated and localized, and through the use of insufflation, invasion of the deep fascial planes and pectoral muscles may be ruled in or out. In the opinion of Dickinson and Gray,[13] roentgenologists with whom the matter was discussed, there are no definite characteristic changes which would differentiate tuberculosis of the breast from a malignant condition. Mastography should be considered one of a number of procedures which may be done in the building up of an accurate preoperative diagnosis.

The absolute diagnosis of mammary tuberculosis is made by the microscopic finding of tuberculous tissue in the lesion. Less often the diagnosis is established by staining or guinea pig inoculation of discharges from sinuses or aspirated material from abscesses. The tuberculin test is thought generally to be of practically no value in establishing a correct diagnosis.

The prognosis of primary tuberculous mastitis is excellent in properly treated cases. In this group of cases the patient is usually in good general health and between the ages of 20 and 50 years. In untreated or inadequately treated cases the disease may spread to involve the regional lymph nodes, if they are not already involved, the thorax and the intrathoracic organs and may ultimately prove fatal. The prognosis of secondary tuberculous mastitis depends entirely upon the activity, extent, location and progress of the primary foci.

Treatment of mammary tuberculosis is surgical and the same in both sexes. Simple mastectomy for the most part is the universally accepted method of choice. In selected cases, however, either more or less radical surgery may be indicated. Berger and Mandelbaum[3] concluded that simple excision of the lesion is adequate in the well localized, discrete nodular variety. Harrington,[11] rightly, recommended radical mastectomy when the process involves the axillary lymph glands or the pectoral muscles.

Curettage, cauterization, injection of sinuses and incision are mentioned only to be condemned as inadequate and dangerous. Local excision could also possibly be included in this group except in the rare case of superficial, well localized involvement when preservation of the breast is a major factor. Frequently local excision does not remove all of the tortuous sinus tracts and diseased tissue.

In conjunction with the surgical treatment general measures should be instituted, and the patient should be cared for in the same manner as that employed for the treatment of tuberculosis elsewhere in the body. Needless to say, foci of infection in other organs should be dealt with in the appropriate way.

REPORT OF CASE

Mrs. E. L. D., a white woman aged 28, was admitted to the Tampa Municipal Hospital on Nov. 24, 1941, complaining of involvement of the right breast.

Family History: The father had had a cerebral hemorrhage three months previously. The maternal grandmother died of carcinoma of the uterus. There was no history of tuberculosis in the family and no history of exposure to tuberculosis.

Past History: The patient had had the usual childhood diseases without sequelae, also typhoid fever in 1930 and measles and malaria fever in 1940. She had been married twelve years and had five children living and well. Following the birth of each of the children, she had been unable to nurse them on the right breast longer than the first three or four days, even though she had nursed them all for from nine to twelve months. Nursing from the right breast had been prevented with each child because, after three or four days of nursing, the right nipple would become tender and painful with the appearance of multiple small vesicles on the nipple. Consequently she had found it necessary to relieve the engorgement of the right breast by manual expression of the milk. The breast had caused no difficulty other than during the nursing periods.

Present Illness: One month before admission to the hospital, the patient noticed a small tender mass in the

lower portion of the right breast about the size of a toy marble. During the ensuing week the mass increased in size and became somewhat tenderer. She then consulted a physician, who treated the right breast locally with antiphlogistin over the mass. One week later a second physician incised the mass and obtained a slight amount of pus and blood. No cultures or smears were obtained. A rubber tissue drain was left in the incision, which drained slightly during the following week. In the interim the breast mass increased rapidly in size to involve two thirds of the breast. The incision showed no evidence of healing two weeks later.

Physical Examination. The patient was well developed and well nourished and appeared to be in excellent general health. The entire physical examination revealed no unusual findings except in the right breast.

The breasts were those of a multipara in type and not pendulous. The right breast was slightly larger than the left. There was a large confluent mass in the central portion, occupying about two thirds of the breast. The old ulcerated incised area, located 1 inch lateral to and slightly above the nipple and measuring 2 by 2 cm., appeared superficial and presented no well defined draining sinuses. The skin around the ulcer was fixed to the breast mass and revealed slight dimpling. The breast mass, however, was not fixed to the deep structures; it was fairly well outlined and lobulated, measuring 9 by 10 cm. The consistency was firm. To light palpation there was moderate tenderness. There was no ulceration, and there was no discharge from the nipple. The mass was opaque to transillumination. There were no axillary, infraclavicular, or supraclavicular glands present on either side. The left breast showed no abnormalities.

The lungs were clear throughout. The blood pressure was 104 systolic and 64 diastolic.

Roentgen Examination: There was definite confusion of the architectural structure of the right breast with clouding of the muscle planes over the chest wall. The findings were consistent with those of a malignant neoplasm of the right breast. There was no demonstrable evidence of axillary involvement. Examination of the chest revealed no evidence of metastasis.

Diagnosis: A tentative preoperative diagnosis of carcinoma or tuberculosis of the breast was made.

Operation: On November 25 a simple mastectomy was performed. During this procedure a large deep abscess was accidentally entered, which contained about 20 cc. of thick, greenish, dirty pus. The entire breast and mass were removed together with a wide margin of normal tissue. No axillary dissection was done.

Direct smear of the pus from the breast abscess was negative for acid-fast bacilli, and broth culture for ordinary pyogenic organisms was negative. A guinea pig inoculation test was negative for acid-fast bacilli.

Pathologic Examination: The specimen consisted of the entire breast, which was covered with skin including the nipple. Adjacent to the nipple on one side there was an elevated, discolored, scarred and ulcerated area. Gross sections showed diffuse induration and also many foci of suppuration.

Microscopically, sections taken from various portions showed no evidence of malignant disease. Throughout these sections there were a predominance of fibrous stroma, many more or less dilated ducts and large areas of intense infiltration by inflamed cells including large numbers of polymorphonuclears. In many areas there were foci of epithelioid cells associated with many giant cells of the foreign body type.

The histologic diagnosis was tuberculous mastitis.

Subsequent Course: The postoperative course was entirely uneventful except for a minor degree of sloughing of the skin margins in two areas. This required no skin grafting and healed in three weeks without difficulty.

Two months after the operation, the patient was in excellent general health. The operative site was well healed without evidence of a recurrence. There were no palpable regional lymph nodes.

COMMENT

It is our opinion that this case was one of primary tuberculous mastitis of the confluent nodular type. The sequence of developments in this lesion had been the presence of a tuberculous nodule which later became confluent throughout the major portion of the breast and finally reached the stage of abscess formation. If more time had been allowed, the abscess would in all probability have ruptured and established a draining sinus, for this development frequently occurs in tuberculous mastitis.

CONCLUSIONS

The incidence of tuberculous mastitis probably approximates 1 per cent of all lesions of the breast.

The diagnosis most often made is that of carcinoma of the breast; however, in all cases of atypical supposed carcinoma of the breast, one should suspect tuberculosis.

It is important that the correct diagnosis be made preoperatively in tuberculous mastitis because the treatment of choice in the great majority of cases is simple mastectomy.

A case of primary tuberculous mastitis is reported.

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INDICATIONS FOR SURGICAL TREATMENT OF DUODENAL ULCER

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While the vast majority of cases of duodenal ulcer can be controlled and cured by proper medical management, there are some in which surgical intervention is necessary and others in which it becomes the treatment of choice. The purpose of this paper is not to offer anything original, but rather to summarize the indications for surgical treatment of the complicated cases of duodenal ulcer which daily confront the general practitioner, internist and surgeon.

Whenever the complications of duodenal ulcer are mentioned, one thinks first of perforation. This is by far the most common complication as well as the most urgent, for life is not compatible with this condition unless the perforation is closed at once. Closure is usually accomplished by surgical means though in a few instances the perforation is sealed off by some abdominal structure, as pointed out by Hunt. In such cases surgical intervention is sooner or later usually required for they do not respond readily to medical treatment as a general rule.

The symptoms of an acute perforation into the free peritoneal cavity begin with a sudden, agonizing epigastric pain, always associated with evidence of shock and usually accompanied by vomiting. The perforating ulcer generally gives no immediate warning, and, sad to say, there is often no antecedent history of ulcer or indigestion. The pain at first is localized, but it rapidly becomes generalized. The temperature is at first subnormal, the pulse rate is slightly elevated, the respirations are shallow, and great abdominal tenderness is present in the upper part of the abdomen though often by the time the patient is seen by the surgeon the abdomen is boardlike and tender all over. Another sign which is of aid, particularly in the differentiation from coronary occlusion, is almost always noticeable if the patient comes walking into an emergency room or office. Invariably he will walk stooped over in an attempt to splint his stomach in contradistinction to the patient with coronary disease, who often walks only slightly stooped, breathes deeply from air hunger and makes little effort to protect the muscles of the stomach from motion.

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Following the administration of stimulants and morphine in adequate doses to relieve the agonizing pain, within a few hours after the perforation shock will have disappeared, the color will be better and the pulse stronger, but the abdominal signs will be little changed as to tenderness though rigidity will have increased. Although the diagnosis may have been made before this time, it is wise, as Graham pointed out, to mark time until the initial shock has passed before attempting surgical measures. One should not delay too long, however, because when treatment is begun after forty-eight hours, there is a high mortality. Examination of the chest and rectum, a blood count and a vertical flat plate roentgenogram of the abdomen are often invaluable aids. The roentgenogram may show gas under the diaphragm, the presence of which is diagnostic.

As soon as the patient has recovered from the initial shock, a high right paramedian or upper midline incision under spinal, local and/or general anesthesia should be made, and the perforated area should be identified and closed by the easiest and least traumatizing method necessary. Closure is, of course, not always easy as the area of induration and edema surrounding the perforation often makes the tissues friable. By starting the first suture a little distance away from the perforation, getting a good bite through the serosa and muscular walls of the stomach and working from two sides toward the middle, the closure can usually be effected. Following this procedure, if the patient is in good shape, a second closing layer is inserted, and an omental graft is fitted into the area and tied. The peritoneal exudate is sucked away, and rapidly the stomach and the duodenum are explored for a second perforation as such a perforation has been found at autopsy in some cases, much to the operator's embarrassment. The peritoneum is closed, and the wound is washed out with sodium chloride and closed anatomically without drainage. Formerly the surgeon washed out the peritoneal cavity also, but since abandoning this practice no difference in the convalescence has been observed. In some cases in which closure of the perforation is impossible, an omental plug firmly secured in the opening will suffice, though closure by suture is preferable.

At the time of operation there always arises the question of whether or not obstruction will follow simple closure and whether pyloroplasty,

gastroenterostomy, or excision of the ulcer should be done. The majority of American surgeons believe with Graham that the patient should be treated as in all emergency surgical cases solely for the reason creating the emergency and that a radical operation at the time of the perforation is a meddlesome surgical procedure. Of course, if obstruction is bound to occur, a Finney Heineke-Mikulicz pyloroplasty or gastroenterostomy should be done, but many a surgeon has been struck with the patient's uneventful recovery without obstruction in some case or cases which appeared doubtful at the time of the operation. Certainly, the mortality is lower in cases of simple closure. Of course, following the conservative surgical procedure, medical treatment of the ulcer should be begun postoperatively. Parker showed that approximately 50 per cent of the patients suffering from a perforating duodenal ulcer will not remain well without further treatment. Of this 50 per cent, 10 per cent, according to Thompson, will require further surgical treatment, which should consist of nothing short of an excision of the ulcer and a partial gastrectomy with removal of approximately half of the stomach proximal to the pylorus. Jacobellis demonstrated that both the hydrochloric acid and total acidity of the stomach are increased in cases of duodenal ulcer. Simple excision of the ulcer would not, therefore, carry the insurance against recurrence that the partial gastrectomy would.

The second indication for surgical intervention in the treatment of duodenal ulcer is gross hemorrhage from the ulcer. The bleeding ulcer, however, presents a much more difficult problem than does the perforating ulcer, and the indications for surgical measures or the surgical procedure of choice cannot be so dogmatically outlined.

Lahey reported that in 18 per cent of the cases of duodenal ulcer in his series gross hemorrhage had occurred; in the reports of other authors the percentage is slightly below this figure. Allen and Benedict observed that a single massive hemorrhage occurring in patients under 50 years of age rarely causes death. Furthermore, because a patient has had one hemorrhage, one has no right to assume that he will have another, providing he continues on medical treatment, though recurrence has been observed. As soon as the general condition will permit, the patient who has had recurrent massive hemorrhages should be operated on. In the young patient who has had or is having a single massive hemorrhage, operation to stop or prevent a second hemorrhage is hazardous as well as probably totally unnecessary. As for the elderly patient beyond the half century mark, Hunt was of the opinion that one massive hemorrhage from which recovery has been brought about by conservative measures is in itself sufficient indication to warrant surgical treatment. Furthermore, he observed that often surgical intervention becomes an emergency measure in cases of this type. He allowed from twelve to twenty-four hours for the patient to improve, but concluded that an operation is indicated if there is no improvement within that length of time. Needless to say, the mortality rate in this type of case is as high as 22 per cent.

In the case of the young patient who is having his first hemorrhage, conservative treatment is certainly the procedure of choice. According to Meulengracht, this consists of immediate frequent liberal feedings. Andresen, however, approved a more rational diet consisting primarily of a gelatin mixture which he believed combines readily with hydrochloric acid, is soothing, is not overstimulating in its effect upon the production of gastric juice and, in addition, is probably an excellent coagulant. Fruit juices and lactose can be added for nutrition. From a review of the literature the mortality appears to be increased when food and fluids are denied at first. If one is reluctant to start with feeding, frozen milk cubes or colloidal aluminum hydroxide drip will have a definite neutralizing effect on the gastric secretion and, hence, will prevent the digestion of the fibrin clot at the site of the hemorrhage while, at the same time, the mechanical factors of solid foods, which may dislodge the clot, are avoided. Of course, absolute bed rest in shock position, morphine or some other opiate given hypodermically and an ice bag to the epigastrium should be ordered. Fluid should be supplied by hypodermoclysis preferably, or slowly by intravenous administration to prevent raising the blood pressure too rapidly.

After the cessation of the hemorrhage the second period of the medical management begins, which, in essence, consists of frequent feedings and, if anemia has resulted, repeated small blood transfusions given slowly. Should a second hemorrhage occur, the ulcer should be excised. Many bleeding duodenal ulcers are situated on the posterior wall of the duodenum. Simple excision is

hard to carry out in cases of this type as exposure is difficult. A partial gastrectomy, however, allows adequate exposure, and the chance of an ulcer recurring is minimized.

The third indication for surgical treatment of the duodenal ulcer is obstruction. This may be due to edema accompanying inflammatory reaction or to scar tissue. Obstruction caused by the former usually begins with symptoms of an active ulcer followed by obstruction and is best treated conservatively or medically, for generally the obstruction is only temporary in character. When the obstruction has appeared gradually and is unmistakably due to cicatricial tissue, a pyloroplasty or gastroenterostomy will usually give excellent results if followed by a dietary regimen for ulcer. Depending on the location and accessibility of the scar tissue, if at all feasible, resection of the ulcer with its surrounding scar tissue appears to give the best results, though this operation is often not possible, particularly when the duodenum is not mobile and is badly scarred. The best results today seem to come when partial gastrectomy with or without removal of the ulcer is done, though Sanders was of the opinion that gastroenterostomy alone will give complete relief of symptoms as a rule.

The fourth indication for surgical intervention in the treatment of duodenal ulcer is not as clearly defined as the three preceding indications. The intractable duodenal ulcer, however, which has resisted medical management and which is accompanied by intractable pain to such an extent that the daily and economic activity of the affected person is greatly impaired, is often considered an adequate indication for operation. Most surgeons of today are of the opinion that the operation of choice in cases of this type is a subtotal gastrectomy, though the opponents of this procedure appear to be increasing. The results following excision of the ulcer only have not given relief in more than 50 per cent of the cases, according to Crile and Crile.

In conclusion, a word is timely in regard to the number of duodenal ulcers which become malignant. Finsterer stated that in 1,500 resections at autopsy he had never met with a malignant form of degeneration in a duodenal ulcer. Hence, if one can accept this extensive piece of work, prevention of malignant degeneration does not appear to be an acceptable indication for surgical measures, and fear of this complication seems groundless.

CONCLUSIONS

The indications for surgical intervention in the treatment of complicated cases of duodenal ulcer are reviewed in the order of their frequency.

Perforation is a surgical emergency. Simple closure of the ulcer without drainage is recommended.

Recurrent hemorrhages, hemorrhage in a patient over fifty years of age, obstruction from scarring and intractable ulceration accompanied by pain are indications for surgical treatment of duodenal ulcers.

The fear of malignant disease occurring in cases of duodenal ulcer appears groundless.

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*Alternate to act for member who is in Armed Services and listed just above.

The Journal of The Florida Medical Association

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ANNUAL MEETING, 1943

Plans have been completed for the Association's annual meting to be held in Jacksonville, Thursday afternoon and Friday forenoon, April 15 and 16, 1943. The regular scientific sessions will be omitted. Three distinguished speakers will be invited to address the general sessions on subjects pertaining to physicians and the war effort. The first speaker will appear on the Thursday afternoon program; the second, after the Association dinner, Thursday evening: and the third, Friday forenoon.

There will be two meetings of the House of Delegates, one Thursday afternoon and one Friday forenoon. At the general sessions and Association dinner the attendance will be restricted to members and official guests.

The printed program will not include meetings of the specialty groups and the Woman's Auxiliary. If any of these groups decide to hold meetings before or after the state convention, they will be entirely independent.

It is planned to recognize in the convention number of the Journal and in the printed program exhibiting firms that have been a valuable and appreciated attraction at our conventions for many years. There will be no special booths arranged for exhibitors, but any firm wishing representation will be permitted to utilize available space in the hotel lobby, provided arrangements have previously been made with the Association, and the representatives register at the convention desk. This invitation is open only to representatives of firms that have exhibited regularly in the past.

It is believed that the doctors' part in the war effort will be better served by holding a curtailed annual meeting. The convention has been restricted to two half days and one evening, and it has been scheduled in the middle of the week so as not to burden transportation and hotel facilities over the week end.

The March, 1943 Journal will be the convention number, and will include a complete program of the annual convention.

DANGER

It has come to the attention of physicians in Florida, particularly to those in the Air Corps of the Armed Forces, that there have been some fatalities resulting from the use of sulfonamides in the treatment of various diseases by civilian doctors. It must be understood that there is no objection on the part of the Army or Navy to members of their forces receiving treatment from civilian physicians. It is extremely important, however, when sulfonamides are used under the direction of a civilian physician, that the chief medical officer of the detachment to which the patient is attached should be acquainted with the fact that such treatment is being given. This is in order that proper precautions may be taken with respect to the activities of the patient during and immediately following such period of treatment. It is not necessary to name the condition for which the person is being treated, merely the fact that one or more of the sulfonamides is being used.

It is a well known fact that these drugs in many instances impair judgment, and, particularly in the case of pilots, keen, accurate and precise judgment is essential.

A letter is being sent to every practitioner of medicine in Florida, asking that reports be made immediately when sulfonamide therapy is begun for any member of the Armed Forces by a civilian physician. Therefore, each member of the Association is asked to cooperate with this program, and it is felt that this cooperation will be forthcoming. Should the attending physician suspect that a member of the Armed Forces has not given his true name, in an endeavor to conceal his condition from the military authorities, there is no reason why he should not ask the patient to identify himself. Every member of the Armed Forces is required to carry such identification at all times.

DONATIONS FOR PURCHASE OF WAR BONDS TO OFFSET DUES OF MEMBERS IN ARMED SERVICES

The Association's income has been drastically reduced owing to the fact that more than 25 per cent of our members have joined the Armed Services and are not now paying annual dues. The Board of Past Presidents, under the leadership of Dr. H. Mason Smith, is urging the members at home to forward donations with which the Association will buy war bonds to offset the annual dues of our members in military service. If the members at home, who are absorbing the practice of their colleagues in service, will contribute to the amount of the dues shortage, these donations will not only assist in financing the Association, which has been organized and expanded by the medical profession, but will also help finance the war. Every member at home is urged to respond promptly to the call of the Board of Past Presidents. The medical profession will thus make a definite contribution to the war effort on a voluntary basis, which will be recognized by the citizens of the entire country.

The plan undertaken by the Board of Past Presidents has been favorably received by the membership as a whole. Many interesting comments accompanied the early donations:

DR. W. C. THOMAS, Gainesville, "I will donate more from time to time." DR. LEIGH F. ROBINSON, Ft. Lauderdale, "I fully endorse the plan and will cooperate in every way possible." DR. HARRISON A. WALKER, Miami Beach, "An excellent idea and I am glad to take a bond for a buddy in service." DR. CLAYTON E. ROYCE, Jacksonville, "The logical thing to do." DR. B. M. RHODES, Tallahassee, "An excellent idea and a worthy cause. I wholeheartedly endorse this solution." DR. V. M. JOHNSON, West Palm Beach, "A good idea." DR. JOHN A. SIMMONS, Arcadia, "I am heartily in accord with raising funds on account of so many of our members being called into the Armed Services." DR. W. M. ROWLETT, Tampa, "Lunched with past presidents in Tampa. They all agreed to purchase war bonds and to donate for additional bonds if necessary." DR. J. HARRIS PIERPONT, Pensacola, "Very sorry my donation could not be more." DR. ESTELLA G. NORMAN, Battle Creek, Mich., made a donation although she was transferred from the state when the Miami-Battle Creek Sanitarium was taken over by the Army. DR. A. W. WOODBURNE, Tampa, although not a member, made a donation as a loyal supporter.

MEMBERS WHO HAVE MADE DONATIONS AS THIS JOURNAL GOES TO PRESS, BY COUNTY SOCIETIES

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BAY COUNTY 5.00
Adams, Powell, Panama City

BROWARD COUNTY 360.00
Blessing, Robert, Ft. Lauderdale
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Stoddard, Guy R., Miami Beach
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Welch, P. B., Miami

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DUVAL COUNTY 626.25
Adams, Mark E., Jacksonville
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Jelks, Edward, Jacksonville
Limbaugh, Louie, Jacksonville
Lyerly, J. G., Jacksonville
Richardson, George W., Jacksonville
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Ross, William E., Jacksonville
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Gilmer, E. S., Tampa
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Lowry, B. W., Tampa
Maguire, T. C., Plant City
Maner, George R., Tampa
Moore, J. T., Tampa
Rowlett, W. M., Tampa
Smith, H. Mason, Tampa
Woodburne, A. W., Tampa

LEE COUNTY 37.50
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Bostelman, Ernest, Ft. Myers

LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON COUNTY 142.00
Brinson, J. B., Monticello
Davis, Julius C., Quincy
Palmer, Henry E., Tallahassee
Pound, J. H., Tallahassee
Rhodes, B. M., Tallahassee
Ruediger, E. Henry, Chattahoochee

ORANGE COUNTY 10.00
Kirk, A. C., Orlando

PALM BEACH COUNTY 58.75
Ditman, Norman E., Palm Beach
George, W. W., West Palm Beach
Johnson, V. M., West Palm Beach
Stephens, Edgar W., West Palm Beach

PASCO-HERNANDO-CITRUS COUNTY 18.75
Jones, W. Wardlaw, Dade City

PINELLAS COUNTY 10.00
Palmer, H. G., St Petersburg

POLK COUNTY 28.75
Dunham, Kenneth, Frostproof
Griffin, J. D., Lakeland

ST. JOHNS COUNTY 10.00
Lockwood, Vernon A., St. Augustine

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Howe, Raymond, Daytona Beach

THE PEPPER SUBCOMMITTEE HEARINGS ON MEDICAL MANPOWER

A report of the hearings before the United States Senate Subcommittee on Education and Labor dealing with medical manpower, which is headed by Senator Claude Pepper, of Florida, is published in the November 21 issue of *The Journal of the American Medical Association.* In an editorial in the same issue *The Journal* discusses the report as follows:

A preliminary editorial on the subject was published in *The Journal* last week. Almost simultaneously with these hearings appeared an editorial in the New York *Times,* a public statement by Michael M. Davis, a press release by the so-called New York Physicians Forum, a group of some one hundred and thirty physicians in New York City. This group includes among its leaders Drs. Ernst P. Boas and Miles Atkinson. Physicians will remember the recent appearance of these two physicians on a forum held in Washington and their insistence on a revolution in the nature of medical practice. Even before the United States entered the war, the prediction was made by many physicians that attempts would occur to utilize the emergency as an excuse for radical changes in the administration of medical services in this country.

In the report of the hearings which follows, attention is called particularly to certain highlights which merit special consideration. Dr. Frank H. Lahey placed before the committee the present status of the Procurement and Assignment Service and indicated some of the difficulties involved in the work which it is conducting. Senator Hill was exceedingly courteous to Dr. Lahey, although somewhat later in the hearings Senator Pepper intimated that Dr. Lahey is merely an automaton or marionette functioning at the behest of the Army and Navy. This will no doubt surprise Dr. Lahey.

Dr. Thomas Parran attempted to state the exact situation as he observed it. Both the Senator and his economist advisers seemed to be much annoyed that Dr. Parran did not adopt the words which they endeavored to put into his mouth.

Paul de Kruif, Ph.D. in bacteriology, indicated that he had not made any personal investigation of the Procurement and Assignment Service or of its work and that he was speaking largely from hearsay. He did draw into the situation the case of Dr. Tom Spies. Immediately following the publicity accorded to this incident, the editor of *The Journal* called Dr. Spies on the telephone. According to what Dr. Spies reported, it was the belief of a friend and preceptor that Dr. Spies should be in military service; apparently this friend asked de Kruif to speak to Dr. Spies on the subject. This was the widely publicized incident which de Kruif characterized by saying that the American Medical Association had "put the finger" on Dr. Spies. The evidence indicates that de Kruif is dissatisfied with the American Medical Association or those whom he characterizes as its leaders, although the specific cause of his annoyance is not made clear.

Mr. Henry J. Kaiser and the director of his medical services, Dr. Sidney Garfield, claim to have had some difficulties with the local representatives of the Procurement and Assignment Service because of their desire to hold in their permanent organization young physicians who have been marked "available" by the Procurement and Assignment Service.

Senator Pepper did not permit the editor of *The Journal* to make any formal statement. The hearing was conducted wholly by the question and answer technic. This procedure Senator Pepper followed frequently with all who appeared, so that much of the hearing is devoted to long statements by Senator Pepper with the answer "Yes, sir" and "Certainly, sir" from those who were supporting the cause in which the hearings were held. The editor of *The Journal* apparently found it difficult to say "Yes, sir"; it will be observed that he frequently said "No, sir."

Dr. E. J. O'Brien, of Detroit, by his own statement hastily summoned to appear, on the suggestion of de Kruif, participated in the tuberculosis campaign in Detroit. Most amazing in his testimony is his statement that he would not oppose a totalitarian government if it could eliminate tuberculosis.

Mr. Michael M. Davis, Ph.D. presumably in economics, spoke as was expected.

It will be interesting to see what kind of report the Subcommittee on Education and Labor makes to its full committee. There is apparently an effort on the part of this senatorial group to set up an independent agency for the control of all manpower, with Mr. Henry Wallace, vice president of the United States, as its head. Presumably they would take authority from the Selective Service System and from the present War Manpower Commission as now constituted and make all agencies subservient to what Senator Pepper calls an "over-all" committee.

MEETING OF PROCUREMENT AND ASSIGNMENT COMMITTEE

The Procurement and Assignment Committee of the state held a meeting in Jacksonville, Sunday, December 6, at the George Washington Hotel. This is a very active committee and is taxing the utmost efforts of its members. The procedures and plans decided upon at this meeting will be disseminated to the chairmen of the local procurement and assignment committees by the representatives of the state committee in the four medical districts. Lieut. Col. Robert G. White of the State Arsenal, St. Augustine, made an interesting talk. Those attending the meeting were Dr. Edward Jelks, chairman, Jacksonville; Dr. Shaler Richardson, vice chairman, Jacksonville; President Gilbert S. Osincup, Orlando; Dr. Walter C. Jones, Miami; Dr. J. C. Dickinson, Tampa; and Dr. Carol C. Webb, Pensacola. Those attending in an advisory capacity were President-Elect Eugene G. Peek, Ocala; Dr. Louie Limbaugh, chairman of the Board of Governors, Jacksonville; and Dr. Stewart Thompson, managing director, Jacksonville.

Immediately following this meeting the officers of the Association convened to make plans concerning the annual convention next year. All members listed above attended this meeting at which Dr. Herbert E. White of St. Augustine, chairman of the Association's Committee on Scientific Work, was requested to be present.

MEMBERS IN ARMED SERVICES

Names and addresses of doctors in the Armed Services, received since the list was published in the November, 1942 Journal:

BROWARD

Lumpkin, Lloyd U. ..... Ft. Lauderdale

DADE

Jack, Ralph W. ..... Miami
McClamroch, James M. ..... "
Rand, Harold ..... "

DUVAL

Leitner, Elmer E. ..... Jacksonville

ESCAMBIA

Haisfield, Harry B. ..... Pensacola

LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON

Andrews, Edson J. ..... Tallahassee
Ekermeyer, Ernest W. ..... "
Miles, W. G. ..... Chattahoochee

PINELLAS

Woodville, John B. ..... St. Petersburg

BIRTHS, MARRIAGES AND DEATHS

BIRTHS

Major and Mrs. Nathan Weil, Jr., formerly of Jacksonville, announce the birth of a daughter, October 3, in Chicago.

MARRIAGES

Dr. William D. Rogers of Chattahoochee and Miss Mary Laughton Bowen of Sneads were married on November 15.

DEATHS

Dr. O. F. Schiffli of Clewiston died on August 18.

Dr. George M. Lochner of St. Petersburg died on November 17.

Dr. Daniel N. Cone of White Springs died December 1, after an extended illness.

Dr. David Rose of Sebastian died on December 5.

STATE NEWS ITEMS

The Florida Public Health Association's annual meeting which was scheduled for December 7-9 in Miami, was canceled, owing to war emergency conditions.

Distinguished visitors at the headquarters office in Jacksonville during the month of November were Dr. Gilbert S. Osincup, Association president, Dr. H. Mason Smith, Chief of War Bond Sales for the Board of Past Presidents, Dr. W. M. Rowlett, secretary of the State Board of Medical Examiners, and Dr. Henry C. Dozier of Ocala, past president.

Dr. Clayton D. Washburn of Jacksonville has announced that his practice will be limited to ophthalmology.

Dr. E. C. Chamberlain of Ft. Lauderdale announces the opening of his office at Las Olas Centre, Ft. Lauderdale. He will limit his practice to internal medicine.

Dr. R. L. Miller of Graceville took postgraduate work at the Buffalo School of Medicine in New York in October.

Dr. Edgar W. Stephens of West Palm Beach was the principal speaker at the Rotary Club luncheon, Tuesday, October 20. His subject was "Building for the Future." Dr. W. E. Van Landingham was in charge of the program.

Dr. M. E. Black of Clearwater was the principal speaker at the Lions' Club luncheon, October 20. Dr. Black discussed benefits accruing to surgery from warfare.

Dr. E. C. Crouch of Jasper spent ten days in October doing postgraduate work in internal medicine at the New York Academy of Medicine.

Members of the Florida Medical Association who attended the meeting in Chicago, October 26-30, of the Inter-State Postgraduate Medical Association of North America were: Frank D. Gray, Orlando; Stephen P. Gyland, Tampa and Ralph W. Jack, Miami Beach.

While in Jacksonville, Monday, November 30, Senator Claude Pepper was in conference with Dr. Gilbert S. Osincup, Chief of Emergency Medical Service, and Dr. Edward Jelks, Chairman of the State Committee on Procurement and Assignment. The purpose of the conference was to discuss questions relating to the shortage of medical care in certain areas of the state. Many of our doctors have gone into military service, and the population has increased rapidly in various communities incident to war activities. Senator Pepper expressed his willingness and desire to cooperate with the doctors of Florida in solving problems which arise due to war conditions.

The Board of Regents of the American College of Physicians has announced the cancellation of their 1943 annual session which was scheduled to be held in Philadelphia, April 13-16, 1943.

The annual oyster roast given by the staff of the Riverside Hospital, Jacksonville, was an event of December 9. It was held at 7:30 p.m. at Dr. T. Z. Cason's farm on the Southside. Preceding the oyster roast a scientific session was held at the hospital, the feature of which was a paper on "Intestinal Fistulae." The surgical aspects were discussed by Dr. Edward Jelks, and the roentgenologic by Dr. W. McL. Shaw. President Gilbert S. Osincup of Orlando and many doctors from nearby cities were invited to join the local physicians on this occasion. A number of service men were in attendance, among whom was Captain John J. O'Malley of the Naval Air Station, commandant of the Station Hospital.

Dr. Noble A. Upchurch of Jacksonville has resigned as city health officer and asked to be retired, effective January 1, 1943. Dr. Upchurch served the city of Jacksonville as its health officer for approximately twenty years and has been an active member of the Florida Medical Association over a long period of years. The City Commission, when accepting Dr. Upchurch's resignation, was lavish in its praise of the splendid work and service rendered by Dr. Upchurch.

JOHN RICHARD HATFIELD

Major John R. Hatfield, U.S.A.M.C., died somewhere in the South Pacific on October 25 of coronary thrombosis.

Dr. Hatfield was born December 11, 1903. He was a graduate of the University of Tennessee, class of 1937. That same year he received his license to practice in Florida and established an office in Orlando, where he enjoyed a large practice until he entered the Army in January, 1941. He had received two promotions in rank, first as Captain and then as Major.

Dr. Hatfield was a member of the Orange County Medical Society, the Florida Medical Association, and a Fellow of the American Medical Association.

GEORGE MITCHELL LOCHNER

Dr. George M. Lochner of St. Petersburg died suddenly at his home on November 17, at the age of 56. Born in Adrian, Michigan, the son of Theodore and Anna Lochner, he received his preliminary education in that city. After teaching school for one year, he entered the University of Michigan from which he received his medical degree in 1909. He opened an office in his home town of Adrian where he practiced until in 1917 when he entered the armed services.

It was in March of 1917 that Dr. Lochner enlisted in the Medical Corps and in May of that year he was commissioned First Lieutenant and later Captain. He served overseas with the American Red Cross and was stationed at Evacuation Hospital No. 4. He later served as Staff Officer, assuming the duties of registrar. He was discharged at Camp Dix, N. J., on May 20, 1919.

In June 1920 Dr. Lochner opened offices in St. Petersburg, where he practiced until the time of his death. He was a member of the staff of Mound Park Hospital and of Mercy Hospital. He was a member of the Pinellas County Medical Society, the Florida Medical Association and the American Medical Association.

Dr. Lochner was an active and prominent member of the Veterans of Foreign Wars, having served as Post Surgeon and Post Commander, Department Surgeon, National Council Member and, since last August, National Surgeon General of the organization. He was also a Mason.

Dr. Lochner was married to Miss Anna Mae Schreder in September 1919. Mrs. Lochner and one sister, Mrs. Jane Martin of St. Petersburg, are the only survivors.

COMPONENT COUNTY SOCIETIES

DADE

The regular monthly meeting of the Dade County Medical Society was held Tuesday, November 3, in the library of the Jackson Memorial Hospital. In the absence of the president and vice president, the secretary, Dr. Wiley M. Sams, presided. The scientific program consisted of the following papers: "The Use of Papaverin in Cardiovascular Disease" by Dr. M. A. Kugel, discussed by Drs. Fuad Hanna and George Lilly; "The Physiology of Congestive Heart Failure" by Dr. E. Sterling Nichol, discussed by Drs. M. A. Kugel and Max Dobrin.

DUVAL

At the meeting of the Duval County Medical Society held November 3 at the Duval County Hospital, the following scientific program, arranged by physicians from the U. S. Naval Hospital, was presented: "Acute Pneumonitis; Diagnosis and Treatment" by Dr. M. J. Capron, discussion opened by Dr. W. W. Kirk; "Cruciate Ligaments" by Dr. A. H. Weiland; "A Case of Pulsating Exophthalmos" by Dr. L. A. Wylie.

LAKE

All members of the Lake County Medical Society have paid their dues for 1942. Serving as officers of this society are Dr. H. S. Cherry, Center Hill, president, and Dr. R. H. Williams, Eustis, secretary-treasurer.

PALM BEACH

The Palm Beach County Medical Society has reported 100 per cent of its membership dues for 1942. Heading this society are Drs. O. B. Hazen, president, and David W. Martin, secretary-treasurer.

PASCO-HERNANDO-CITRUS

Dr. W. B. Moon of Crystal River entertained the Pasco-Hernando-Citrus County Medical Society on Thursday evening, November 12, at the Magnolia Lodge in Crystal River. A full course fish and oyster dinner was served. At the scientific meeting which followed the dinner, clinical cases were reported by Dr. W. H. Walters, Lacoochee, and Dr. S. C. Harvard of Brooksville. These cases were discussed by the other physicians present.

Dr. W. W. Jones of Dade City was recognized as the first member of the society to purchase a war bond for the benefit of the Florida Medical Association. Dr. W. H. Walters invited the society to hold its next meeting at his home in Lacoochee.

The following members attended this meeting: Drs. G. R. Creekmore and S. C. Harvard, Brooksville; P. J. Hudson and W. B. Moon, Crystal River; W. W. Jones, Dade City; C. L. Carter, Inverness, and W. H. Walters, Lacoochee.

PINELLAS

At the meeting of the Pinellas County Medical Society held at the Shrine Club, St. Petersburg on November 6, the following program was presented: "Case Report," Dr. Howard Bucknell; "Rheumatic Heart Disease," Dr. J. A. Bradley; and "March Fractures," Dr. Prescott LeBreton.

A round table discussion featured the meeting of the society held on November 28 at the home of Dr. M. O. McNey.

POLK

The Polk County Medical Society held its monthly meeting at the New Florida Hotel in Lakeland on the evening of November 11. The principal speaker was Capt. James C. Green of the Army Medical Corps at Drane Field. Dr. Green gave a highly informative talk on army tactics in cases of civilian air raids and chemical warfare. A report was given of the result of 3,700 roentgen examinations made by the State Tuberculosis Association in Polk County.

ABSTRACT DEPARTMENT

Members of the Florida Medical Association who have had articles published in out-of-state medical journals are requested to forward such journals or reprints to Box 1018, Jacksonville, for abstracting in this department.

Decreased Fragility of Erythrocytes Interfering with Leucocyte Count, Bohrod, Milton G., Miami Beach, J. Lab. & Clin. Med. 26: 1953-1955 (Sept.) 1941.

A report is made of a case in which anemia developed in a patient after delivery of a premature dead fetus (twenty-six weeks' gestation). Subsequently it was noted that a leukocyte count could not be performed because of what appeared to be debris in the counting chambers. This debris turned out to be clumped red cells of a peculiar bowl shape which proved resistant to the ordinary 1 per cent acetic acid used in making leukocyte counts. These cells were also resistant to the action of hypotonic salt solution and even to distilled water.

These findings are of interest to laboratory workers. From a physiologic standpoint, the fragility of erythrocytes seems to be dependent on the shape of the cell.

A SOURCE OF INDUSTRIAL HAZARD FROM HYDROGEN SULFIDE GAS, ROBINSON, LEIGH F.; CAMP, MILTON N.; AND CHAMBERLAIN, E. C., FT. LAUDERDALE, SOUTH. M. J. **35**: 621-623 (JUNE) 1942.

The authors direct attention to the hazard of poisoning by hydrogen sulfide gas in Florida, especially to persons engaged in digging and excavating in the oolithic limestone of South Florida.

The effects of the gas are both acute and chronic, and may occur in spite of its characteristic odor, because, when highly concentrated, the gas causes a paralysis of the olfactory organs. In acute poisoning unconsciousness rapidly develops, and if the victim is not quickly removed from the presence of the gas, death will occur. In the subacute or chronic type of poisoning, there is usually a history of exposure, followed by mild systemic symptoms and local irritation of the skin, mucous membranes and the eyes.

It is interesting to note that poisoning is easily preventable by establishing suitable rest periods at regular intervals while workers are engaged in excavating. To be remembered also are the effects of hydrogen sulfide on abrasions and wounds. Such wounds are slow in healing and assume the characteristics of impetigo.

PRIMARY DEGENERATION OF THE CORPUS CALLOSUM (MARCHIAFAVA'S DISEASE), BOHROD, MILTON G., MIAMI BEACH, ARCH. NEUROL. & PSYCHIAT. **47**: 465-473 (MAR.) 1942.

This is an extremely interesting report of an exceedingly rare condition. The case presented is the forty-third in medical literature.

Primary degeneration of the corpus callosum is a selective process. The patient in this case, like those in most of the others reported, had a history of chronic alcoholism. The cause of the disease seems to be poisoning from alcohol or other toxic agent, usually accompanied by a deficiency of the vitamin B complex, and possibly some unknown racial factor.

The detailed report of the clinical findings and the thorough study of the pathologic changes found at postmorten examination make this paper well worth study and a source of material for students interested in this rare disease.

ADVERTISERS' NOTES

VITAMIN FILMS IN COLOR

During the past year the three 16-mm. silent motion pictures in color, describing certain vitamin deficiency diseases, which were made available by Eli Lilly and Company, Indianapolis, for showing before medical groups under sponsorship of a physician, have been in continuous demand. One film deals with deficiency of thiamine chloride (beriberi), another with nicotinic acid deficiency (pellagra), and the third with ariboflavinosis. To meet increasingly frequent demands for the films, additional new prints have been placed in circulation and are now ready for loan. The major part of all films concerns the clinical picture presented by the patient with reference to treatment by diet and specific medication. They do not contain advertising of any description, nor is the name of Eli Lilly and Company mentioned.

The films were made at the Nutrition Clinic of the University of Cincinnati at the Hillman Hospital, Birmingham, Alabama, where studies were initiated in 1935, under the joint auspices of the Department of Internal Medicine of the University of Cincinnati and the University Hospitals of Cleveland. Subsequently, these investigations became a cooperative project between the Departments of Medicine of the University of Cincinnati and the University of Alabama, and the Department of Preventive Medicine and Public Health of the University of Texas.

RULES FOR OBTAINING EYE COMFORT

Methods of conserving and salvaging eyesight to help speed up war production, based on latest eye knowledge, were outlined recently by Dr. T. L. Story, Medical Director of the American Optical Company. In an interview he urged both industry and workers to follow these rules to obtain maximum eye comfort, safety and efficiency: (1) Have eyes examined periodically to ascertain whether the visual performance of each eye and of both eyes working together as a unit is up to par. (2) If eye defects are present, prevent eyestrain by wearing corrective lenses during working hours. (3) Eat foods containing Vitamin A, an essential in the functioning of eyes, particularly those eyes exposed to glaring lights. (4) At all times work under sufficient illumination so that the eyes need not strain to see. (5) If engaged in close work, rest eyes occasionally by looking at distant objects or scenes. (6) Save eyes from injury or blindness by wearing safety goggles on eye-hazardous jobs. "If these simples rules are conscientiously followed," declared Dr. Story, "98 per cent of all industrial eye accidents can be eliminated, and eye efficiency increased 5 to 25 per cent."

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POLK COUNTY AUXILIARY

The Woman's Auxiliary of the Polk County Medical Society began its fall activity at a dinner meeting at the county hospital, October 25.

The year's work was outlined and it was decided to continue the projects of last season. The auxiliary owns a hospital bed which is rented for a nominal sum when needed and the proceeds are used for public welfare work and health education; Hygeia, national health magazine published by the American Medical Association, is placed in 10 schools recommended by the county health nurse; periodic health examinations for household servants are sponsored; and war bonds are sold at the meetings. The auxiliary recently purchased a $100 bond.

The auxiliary voted to extend honorary membership this year to active members whose husbands are in military service.

LOAN FUND

The Woman's Auxiliary to the Florida Medical Association has created a loan fund to be administered for the benefit of University students. The office of the Dean of Students has just received a second installment to be credited to this fund in the amount of $150. The Woman's Auxiliary hopes to help some deserving student of the University of Florida complete his education. The total amount of the fund at present is $300, and the Committee on Scholarships and Loans would welcome applications for this loan. Fol-

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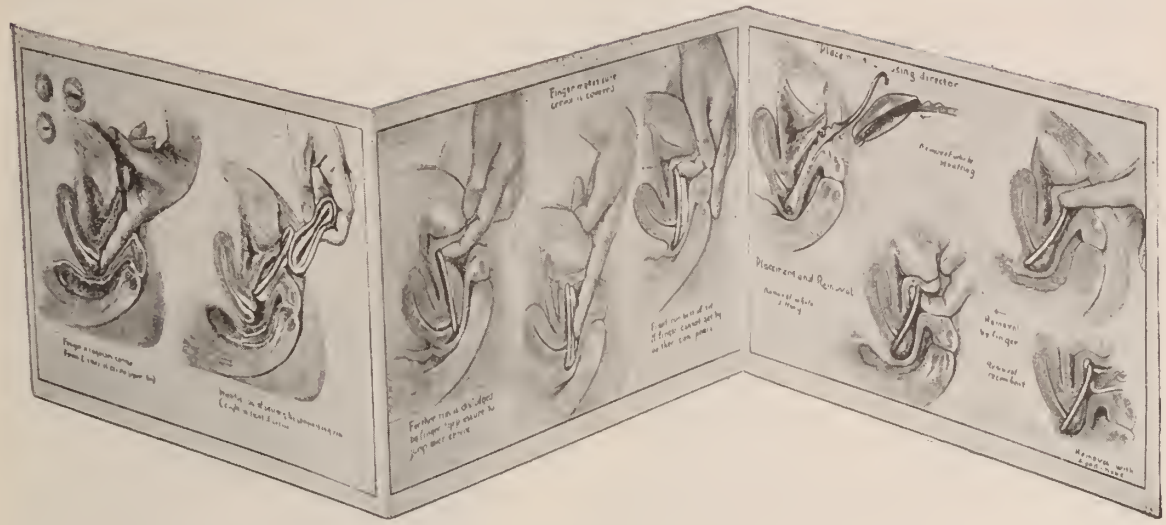
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lowing are the conditions under which the loan may be granted:

(1) The applicant must be the son of a medical doctor who has been or who had been a member of the Florida Medical Association for ten years.

(2) He must have a C average on all work carried at the time of application.

(3) He must be of good character, as evidenced by testimonials from people who know him, and he must not have been involved in any conduct requiring disciplinary measures by the Student Honor Court or the Faculty Discipline Committee.

(4) He must not be an active member of a social fraternity.

(5) No applicant will be granted a loan of more than $150 for the year.

(6) The loan will be disbursed and collected through the Business Office of The University of Florida.

(7) The loan is not to bear interest of more than three per cent (3%), beginning at graduation and must be repaid in full by the end of three years.

(8) The applicant will give a note in the amount of the loan and will be required to have some reliable person endorse the note.

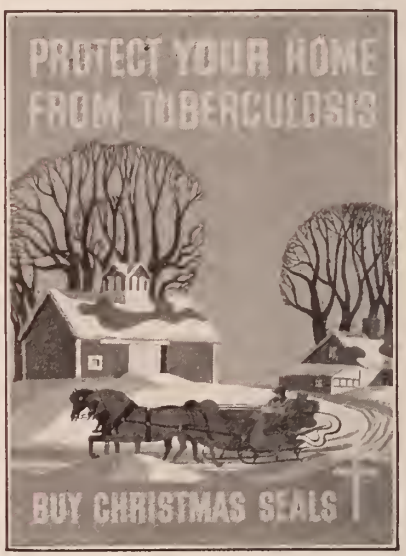
This loan fund was initiated by the Woman's Auxiliary to the Florida Medical Association in 1940. Mrs. G. C. Tillman of Gainesville is chairman of the committee responsible for the institution of the fund.

BOOKS RECEIVED

Acknowledgment of books received will be made in this column and this will be deemed by us a full compensation to those sending them. A selection will be made for review as expedient.

PHARMACOPOEIA OF THE UNITED STATES, TWELFTH REVISION. Prepared by the Committee of Revision and Published by the Board of Trustees, by authority of the United States Pharmacopoeial Convention, Meeting at Washington, D. C., May 14 and 15, 1940. The long list of added items indicates the up-to-date character of the new book. The Twelfth Revision marks a new era in the growth and development of Pharmacopoeias. For the first time a program is fully launched for a new Pharmacopoeia every five years, a bound "Supplement" halfway between, and, to meet the frequently occurring situations which require immediate attention, "Interim Revision Announcements" or sheet "Supplements," whenever these are required. By these accelerated procedures the Pharmacopoeia is endeavoring to keep pace with the rapid developments of modern medicine and the related sciences. Electrotyped, printed and distributed by Mack Printing Company, Easton, Pa.

AMBASSADORS IN WHITE. THE STORY OF AMERICAN TROPICAL MEDICINE. By Charles Morrow Wilson. This is a book of utmost importance and interest to North American readers, since one of the greates thandicaps to hemispheric prosperity and solidarity is the disease and malnutrition in tropical America. Cloth. Price, $3.50. Pp. 372, with illustrations. New York: Henry Holt and Company, 1942.



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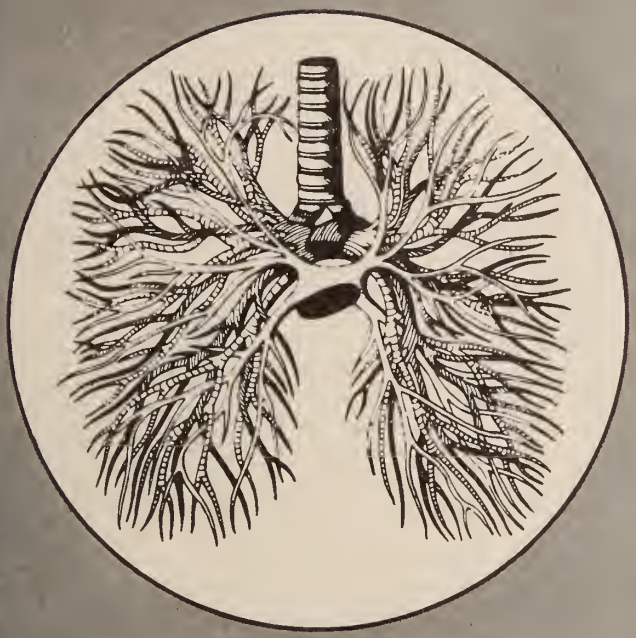
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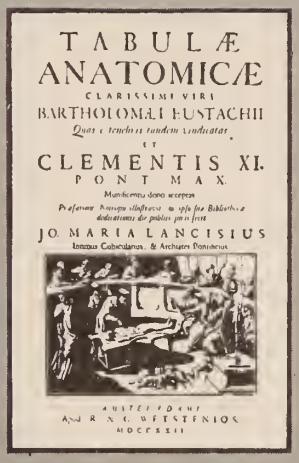
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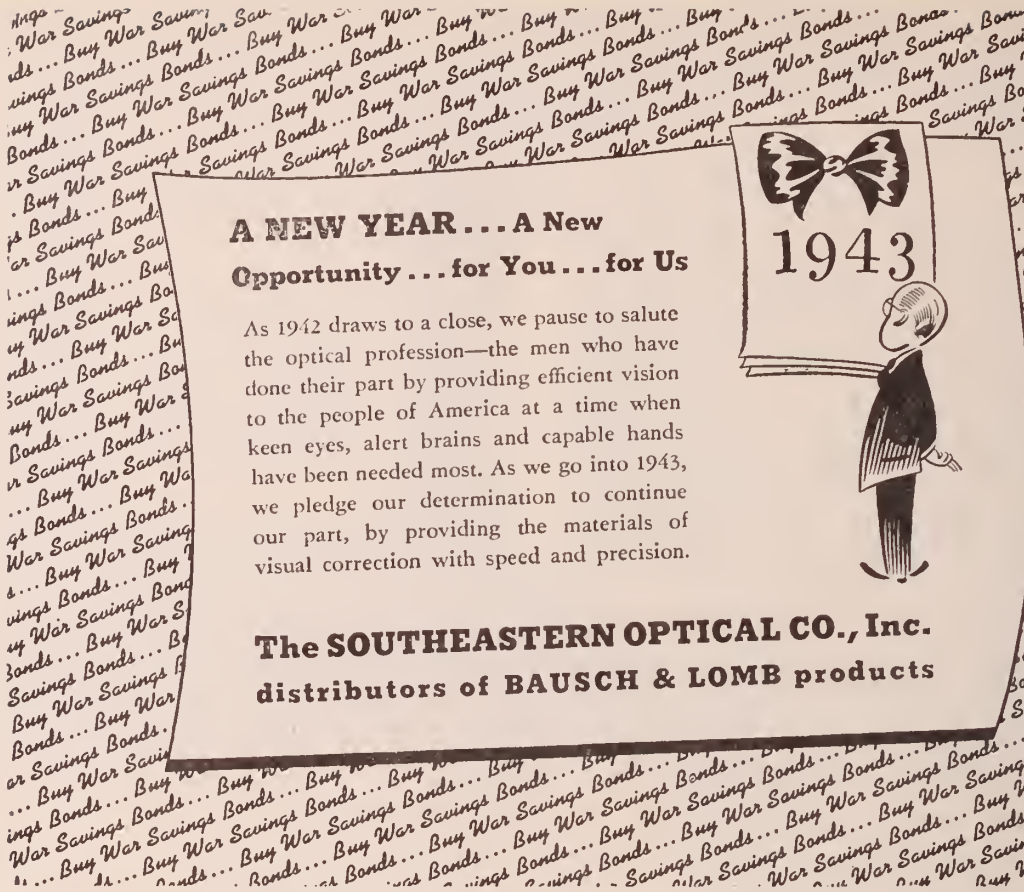
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STATE AND SECTIONAL MEETINGS

SOCIETY	PRESIDENT	SECRETARY	ANNUAL MEETING
Florida Medical Association	Gilbert S. Osincup, Orlando	Shaler Richardson, Jacksonville	April 15-16, 1942
Florida Medical Districts:			
A—Northwest	Courtland D. Whitaker, Marianna	Stewart Thompson, Jacksonville	Tallahassee, Postponed
B—Northeast	L. Y. Dyrenforth, Jacksonville	" " "	Ocala, Postponed
C—Southwest	Edgar Watson, Lakeland	" " "	Sarasota, Postponed
D—Southeast	William Y. Sayad, W. Palm Beach	" " "	Miami, Postponed
Alabama Medical Association	H. B. Searcy, Tuscaloosa	D. L. Cannon, Montgomery	Birmingham, Apr. 20-22, 1943
Georgia, Medical Assn. of	James A. Redfearn, Albany	E. D. Shanks, Atlanta	Atlanta, May 11-14, 1943
Florida—			
Section, Am. College Phys.	R. H. Knowlton, St. Petersburg	Kenneth Phillips, Miami	To Be Announced
Dental Society, State	A. Malcolm Smith, D.D.S., Tampa	W. P. Wood, Jr., D.D.S., Tampa	
Derm. and Syph., Soc. of	Wiley M. Sams, Miami	Lauren M. Sompayrac, Jacksonville	To Be Announced
East Coast Medical Association	T. C. Kenaston, Cocoa	I. M. Hay, Melbourne	Melbourne, 1942
Hospital Association	Mr. Ernest G. McKay, Tampa	Mr. R. L. Martin, St. Petersburg	Tampa—Postponed
Industrial Surgeons, Assn. of	Frank D. Gray, Orlando	Richard H. Walker, Orlando	To Be Announced
Medical Postgraduate Course	Turner Z. Cason, Jacksonville	Chairman	
Nurses Association, State	Mrs. Ann Thompkins, Leesburg	Miss Madalee Hazel, St. Petersburg	
Ophthal. & Otol., Soc. of	Shaler Richardson, Jacksonville	C. E. Dunaway, Miami	To Be Announced
Pathological Society	L. Y. Dyrenforth, Jacksonville	Iva C. Youmans, Miami	To Be Announced
Pediatric Society	Ludo von Meysenbug, Daytona B.	Robert Blessing, Ft. Lauderdale	To Be Announced
Pharmaceutical Association, State	Mr. Emmett L. Brown, Palatka	Mr. R. Q. Richards, Ft. Myers	
Public Health Association	W. H. Pickett, Jacksonville	Lloyd N. Harlow, Jacksonville	Postponed
Radiological Society	John N. Moore, Ocala	Walter A. Weed, Orlando	To Be Announced
Railway Surgeons' Association	Frank D. Gray, Orlando	W. C. Page, Cocoa	To Be Announced
Tuberculosis & Health Assn.	Mr. E. M. Newald, Orlando	Mrs. C. R. Whitaker, Eustis	To Be Announced
Chattahoochee Valley Med. Assn.	Herbert E. White, St. Augustine	Robert B. McIver, Jacksonville	Postponed
Gulf Coast Clinical Society	G. G. Oswalt, Mobile, Ala.	C. L. Rutherford, Mobile, Ala.	Mobile, 1942
S.E. Sec., Am. Cong. Phys. Ther.	John J. McGuire, Pensacola	Kenneth Phillips, Miami	
Southeastern Surgical Congress	Alton Ochsner, New Orleans	B. T. Beasley, Atlanta	Postponed
Southern Medical Association	M. Pinson Neal, Columbia, Mo.	Mr. C. P. Loranz, Birmingham	
Suwannee River Medical Society	L. J. Arnold, Jr., Lake City	T. H. Bates, Lake City	Lake City, Dec. 1942

COMPONENT SOCIETIES BY DISTRICTS

	SOCIETY	PRESIDENT	SECRETARY	MEETING DATE	MEMBERS Total	MEMBERS Paid	COUNCILOR
A	Bay	J. Powell Adams, M.D. Panama City	J. O. Barfield, M.D. County Health Unit Panama City		11	10	
	Escambia *Santa Rosa*	M. W. Dodson, M.D. 309 Brent Bldg. Pensacola	Alvyn W. White, M.D. 24 W. Chase St. Pensacola	2nd Tuesday 8:00 P.M.	52	51	A-1-43 C. D. Whitaker, M.D. Marianna
	Franklin-Gulf	Thos. Meriwether, M.D. Wewahitchka	J. R. Norton, M.D. Port St. Joe	3rd Tuesday Odd Months	5	4	
	Jackson *Calhoun*	W. R. Wandeck, M.D. Marianna	R. N. Joyner, M.D. Marianna	2nd Tuesday 7:30 P.M.	12	100%	
	Walton-Okaloosa	A. G. Williams, M.D. Lakewood	R. B. Spires, M.D. DeFuniak Springs	3rd Thursday 8:00 P.M.	6	100%	
	Washington-Holmes	N. J. Dawkins, M.D. Vernon	B. W. Dalton, M.D. Vernon		6	100%	
B	Columbia *Baker, Hamilton*	Harry S. Howell, M.D. Blanche Hotel Annex Lake City	Thomas H. Bates, M.D. Blanche Hotel Annex Lake City	1st Monday 7:30 P.M.	11	100%	A-2-44 William D. Rogers, M.D. Chattahoochee
	Leon-Gadsden-Liberty-Wakulla-Jefferson	G. H. Garmany, M.D. Midyette-Moor Bldg. Tallahassee	B. A. Wilkinson, M.D. Telephone Bldg. Tallahassee	Quarterly 3:00 P.M.	40	39	
	Madison-Suwannee	Eustace Long, M.D. Madison	E. D. Thorpe, M.D. Madison		8	100%	
	Taylor *Dixie, Lafayette*	J. C. Ellis, M.D. Perry	Chas. A. O'Quinn, M.D. Perry	Last Friday 8:00 P.M.	5	100%	
B	Alachua *Bradford, Gilchrist, Union*	R. E. Summitt, M.D. 122 No. Pleasant St. Gainesville	Chester F. Ahmann, M.D. 1043 W. Masonic Gainesville	2nd Wednesday 7:30 P.M.	29	25	B-3-43 L. Y. Dyrenforth, M.D. Jacksonville
	Duval *Clay, Nassau*	Ernest B. Milam, M.D. 508 Greenleaf Bldg. Jacksonville	T. Z. Cason, M.D., *Acting* 2033 Riverside Ave. Jacksonville	1st Tuesday 8:15 P.M.	194	100%	
	Marion *Levy*	B. S. Stutts, M.D. Anderson Bldg. Dunnellon	T. Hartley Davis, M.D. 202 Commercial Bank Ocala	3rd Thursday 12:30 P.M.	29	28	
	Putnam	J. Worth Brantley, M.D. Grandin	C. M. Knight, M.D. Palatka	2nd Tuesday Even Months 7:00 P.M.	10	100%	
	St. Johns	W. D. Webb, M.D. 220 St. George St. St. Augustine	Charles C. Grace, M.D. East Coast Hospital St. Augustine	3rd Tuesday 8:30 P.M.	12	100%	
C	Brevard	G. T. von Colditz, M.D. Route 1 Cocoa	I. K. Hicks, M.D. Melbourne	3rd Wednesday	11	100%	B-4-44 Meredith Mallory, M.D. Orlando
	Lake *Sumter*	H. S. Cherry, M.D. Center Hill	R. H. Williams, M.D. County Health Unit Eustis	1st Thursday 12:30 P.M.	20	100%	
	Orange *Osceola*	Spencer A. Folsom, M.D. 319 Exchange Bldg. Orlando	R. D. Thompson, M.D. State Sanatorium Orlando	3rd Wednesday 8:30 P.M.	89	86	
	Seminole	C. L. Park, M.D. 515 1st Nat. Bank Bldg. Sanford	Leland H. Dame, M.D. Co. Health Unit Sanford	2nd Monday 7:00 P.M.	12	100%	
	Volusia *Flagler*	W. C. Pay, M.D. 221 W. Rich Ave. DeLand	R. L. Miller, M.D. 258½ S. Beach St. Daytona Beach	2nd Tuesday 7:30 P.M.	46	43	
C	Hillsborough	T. C. Maguire, M.D. 104 S. Collins St. Plant City	James S. Grable, M.D. 811 Citizens Bldg. Tampa	1st Tuesday 8:00 P.M.	107	104	C-5-44 Leland F. Carlton, M.D. Tampa
	Manatee	L. W. Blake, M.D. Bradenton	M. M. Harrison, M.D. Professional Bldg. Bradenton	3rd Tuesday 7:00 P.M.	14	100%	
	Pasco-Hernando-Citrus	J. T. Bradshaw, M.D. San Antonio	G. R. Creekmore, M.D. Brooksville	2nd Thursday 7:00 P.M.	13	100%	
	Pinellas	W. C. McConnell, M.D. 313 First Federal Bldg. St. Petersburg	Annette M. Feaster, M.D 166 Fourth Ave. N. E. St. Petersburg	1st and 3rd Fridays 6:30 P.M.	104	100%	
	Sarasota	O. H. Cribbens, M.D. 138 N. Link Sarasota	A. O. Morton, M.D. Commercial Court Sarasota	2nd Tuesday 8:30 P.M.	18	15	
D	DeSoto-Hardee-Highlands-Charlotte-Glades	M. C. Kayton, M.D. Wauchula	C. H. Kirkpatrick, M.D. Box 454 Arcadia	2nd Tuesday 8:00 P.M.	20	100%	C-6-43 Edgar Watson, M.D. Lakeland
	Lee *Collier, Hendry*	H. Quillian Jones, M.D. 18 Leon Bldg. Fort Myers	W. H. Grace, M.D. Box 907 Fort Myers	3rd Tuesday 7:30 P.M.	17	100%	
	Polk	T. G. Simmons, M.D. Corlett Bldg. Auburndale	Edgar Watson, M.D. Box 1021 Lakeland	2nd Wednesday 1:00 P.M.	59	58	
D	Palm Beach	O. B. Hazen, M.D. Comeau Bldg. W. Palm Beach	D. W. Martin, M.D. 618 Comeau Bldg. W. Palm Beach	4th Monday 8:00 P.M.	68	100%	D-7-43 William Y. Sayad, M.D. West Palm Beach
	St. Lucie-Okeechobee-Indian River-Martin	R. C. Boothe, M.D. Box 408 Ft. Pierce	Adrian M. Sample, M.D. Box 176 Ft. Pierce	3rd Thursday 8:00 P.M.	17	100%	
	Broward	Elbert McLaury, M.D. 210 Hollywood Bk. Bldg. Hollywood	O. C. Brown, M.D. 915 Sweet Bldg. Fort Lauderdale	4th Wednesday 8:00 P.M.	41	100%	D-8-44 Elbert McLaury, M.D. Hollywood
	Dade	Thomas O. Otto, M.D. 515 E. Dilido Dr. Miami Beach	Wiley M. Sams, M.D. 305 Ingraham Bldg Miami	1st Tuesday 8:30 P.M.	345	337	
	Monroe	Harry C. Caley, M.D. 532 Fleming St. Key West	W. R. Warren, M.D. 511 Eaton St Key West	1st Sunday 9:00 P.M	5	100%	

*Supervise and aid until organized separately.



NEW YORK ACADEMY OF MEDICINE
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The JOURNAL of the Florida Medical Association, Inc.

Vol. XXIX JANUARY, 1943 No. 7

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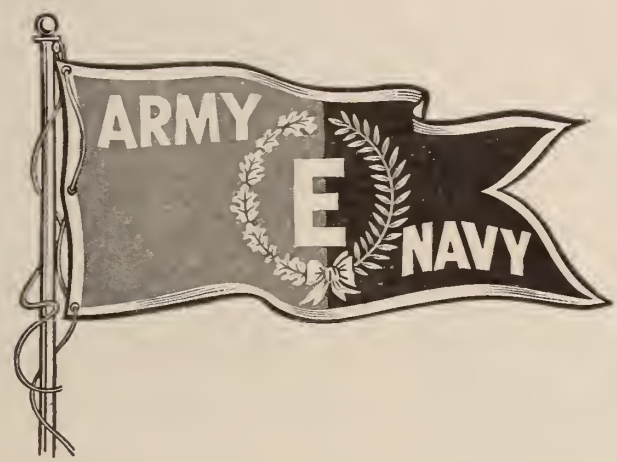
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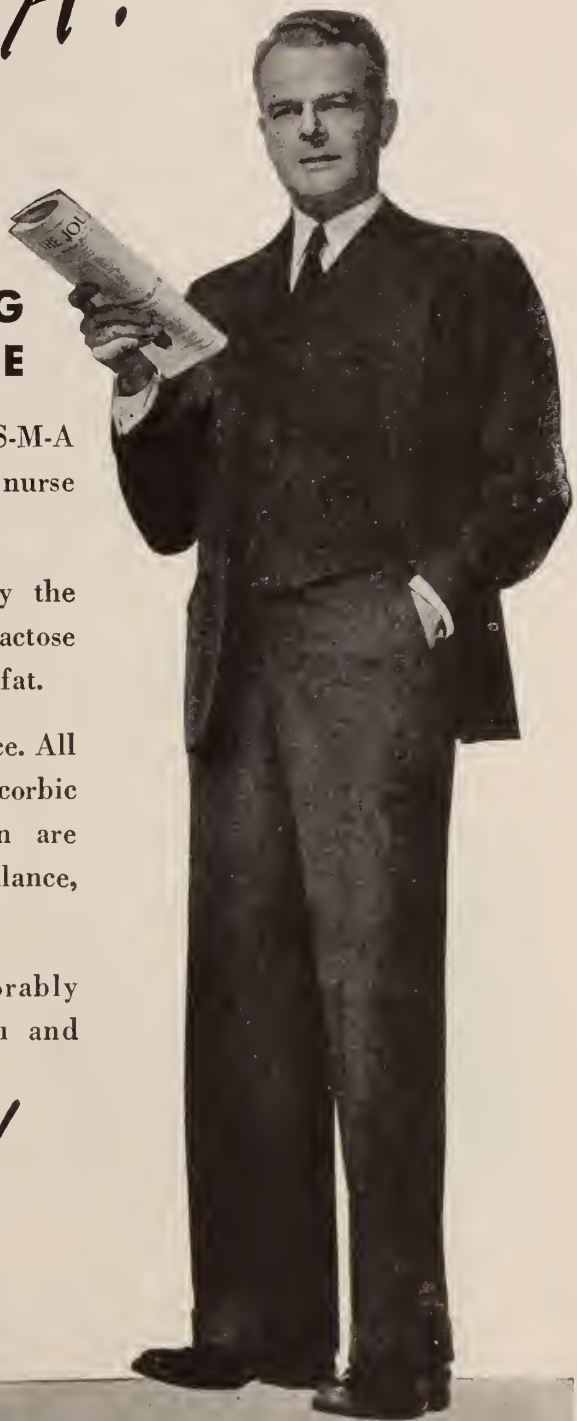
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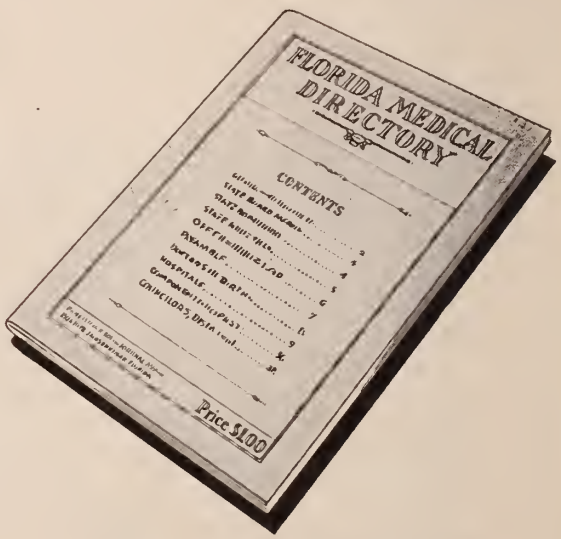
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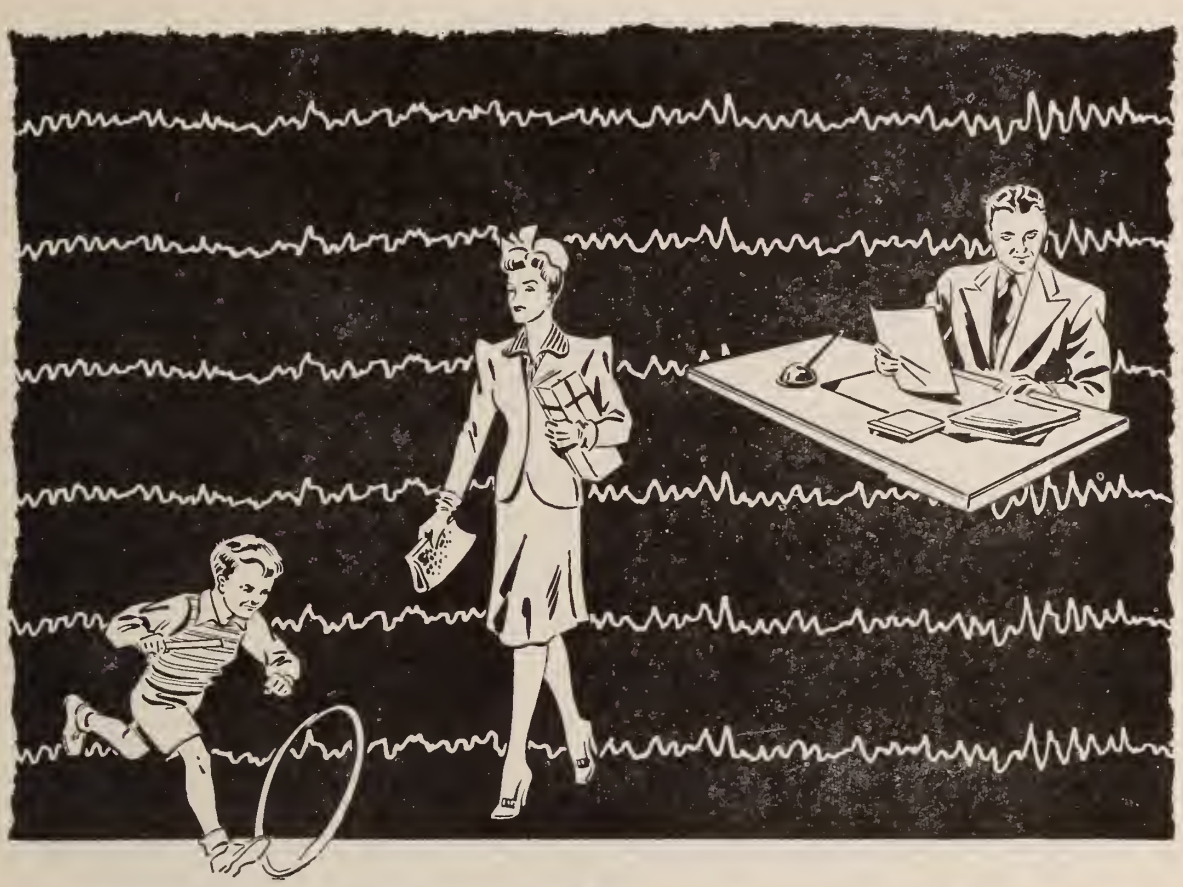
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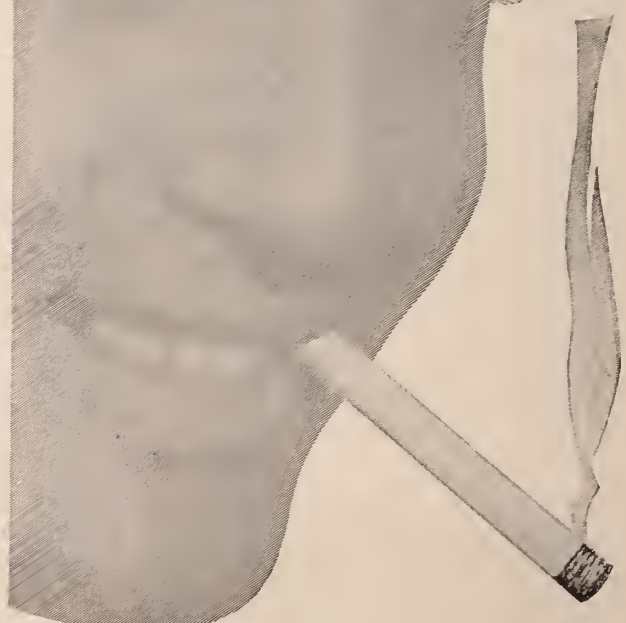
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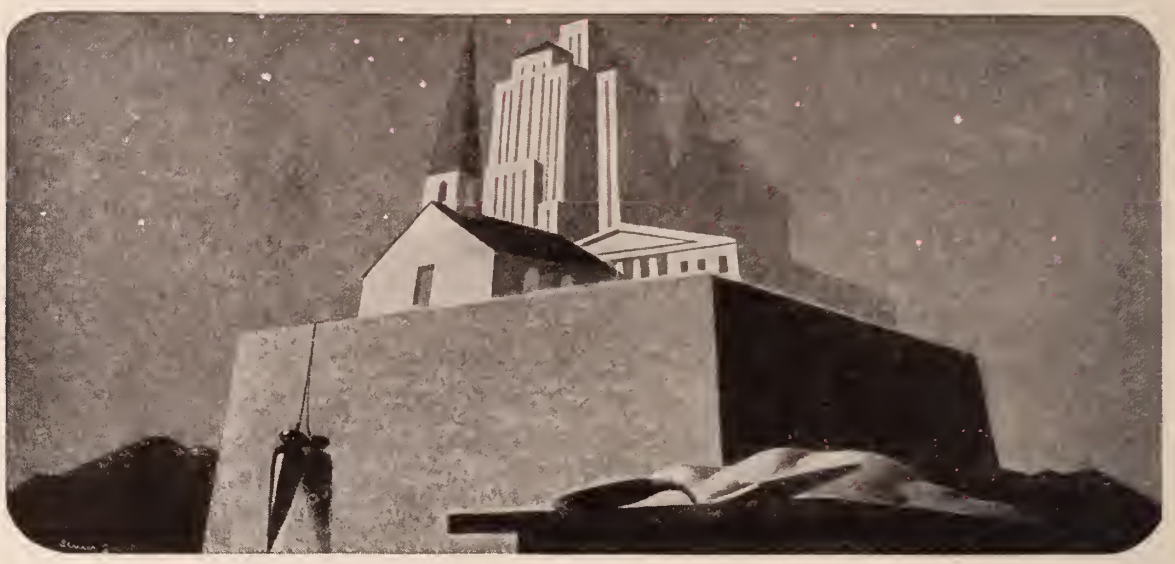
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SAFEGUARDS IN CATARACT SURGERY

FRANK E. BURCH, M. D.
AND
EDWARD P. BURCH, M. D.
ST. PAUL

The two most frequent complications of cataract surgery are loss of vitreous during operation and postoperative prolapse of iris. Naturally postoperative infection is the most dreaded of all complications. The reasons for loss of vitreous are several, including an apprehensive patient and a nervous operator, but incomplete anesthesia resulting in "squeezing" when the orbicularis is not paralyzed is perhaps the most frequent cause. Other primary and contributing causes are increased ocular tension, fluid vitreous and undue pressure during delivery of the lens because of a faulty incision, limited size of the palpebral fissure, too deep or too prominent an eye, or failure of the patient to look down. It should also be mentioned that occasionally too forceful irrigation of the anterior chamber, faulty technic of iridectomy and replacement of the pillars of the iris after the lens is delivered may cause the vitreous to present. Basically, one of the chief causes is imperfect akinesia and anesthesia.

The causes of postoperative prolapse of iris are even more numerous than the causes of prolapse of vitreous during operation. Sneezing, coughing, straining in defecation or urination, difficulty in mounting bed pan, faulty nursing or restlessness, gas pain and an uncomfortable dressing are all contributing factors, secondary perhaps to a "gaping wound." A frequent cause is postoperative hemorrhage; another is herniation of the iris into the wound because of insufficient communication between the posterior and anterior chambers. Also, one may mention failure to use cycloplegia in complete iridectomy, or miotics when a round pupil is preserved.

What safeguards may one take in order to prevent these two chief complications? The two main procedures which will obviate most of the complications are fairly modern improvements in cataract surgery, namely, better methods of anesthesia and akinesia, and the use of sutures. These valued changes in technic have come about gradually during the past twenty years and have proved helpful, and exceedingly desirable, in avoiding complications.

We have already mentioned the apprehensive patient. The administration of sedatives as an aid in preparation for operation under local anesthesia is desirable. Morphine, codeine and pantopan are not desirable because vomiting often follows their use. Sodium bromide, grains 30 by mouth, is excellent. The administration of 1½ grains of nembutal the night before and one hour before the patient goes to the operating room is exceedingly valuable. Sodium amytal in 2 or 3 grain doses administered the night before and one hour and a half, and one hour before operation in the morning usually does not produce such profound sleep as to interfere with cooperation. The barbiturates are not only valuable aids to anesthesia, but they also aid in lowering blood pressure. They allay apprehension without destroying consciousness. On a few occasions in exceedingly apprehensive patients pentothal sodium given intravenously has been employed for anesthesia. Evipan has not proved satisfactory. General anesthetics are rarely necessary, and they are a distinct disadvantage. One is never certain what the reaction may be. The use of sodium amytal, luminal, nembutal or seconal is sufficient for all ordinary purposes. These drugs are exceedingly helpful and have become, in fact, almost indispensable. We have not experienced more postoperative delirium following their use than in the old days when chloral and bromides were used.

Among the standardized local anesthetics, we prefer ½ per cent pontocaine. Cocaine has its disadvantages. It will not remain stable for long periods after boiling, although freshly boiled solutions of cocaine are perfectly satisfactory. A cocaine formula used for twenty years is a 4 per cent solution of cocaine in ½ per cent chloretone solution containing 1:4000 adrenalin. The chloretone is the preservative. These solutions are made fresh each week. There has never been occasion to believe that infection has followed use of this

From the Department of Ophthalmology, University of Minnesota.

Read before the Fourth Annual Meeting of the Florida Society of Ophthalmology and Otolaryngology, Hollywood, Apr. 12 and 13, 1942.

cocaine preparation, but cocaine has the disadvantage that it produces paralysis of lacrimation and desiccation of the cornea, with occasional detachment of epithelium during the act of expression, especially when cocaine has been used for too long a time before actual section and delivery of the lens and if the eye has not been kept occluded with a moist compress. In ordinary strength and in the quantity used for cataract surgery, there is no danger of toxic effect from cocaine. The old rule of instilling local anesthetics four times at intervals of four minutes will produce adequate anesthesia, providing the tension of the eye is not elevated and the eye is not congested. A tense eye or one with undue congestion does not absorb cocaine readily, and solutions of higher percentage are required. The moderate amount of dilation of the pupil produced by cocaine may be enhanced by adrenalin. Ordinarily it is good practice not to apply full strength adrenalin until after the last instillation of cocaine, about one minute before starting the operation.

Pontocaine possesses distinct advantages over cocaine, although an occasional patient is allergic to it. Pontocaine solution need not be boiled, does not desiccate the cornea, does not produce mydriasis and will not deteriorate with age. Anesthesia occurs quickly. Its effect is as durable as cocaine.

As a rule, local anesthesia should be begun when the surgeon and his assistant are scrubbing up, before the patient enters the operating room so that preparation of the field will be painless. The gloved assistant, or the operator himself, uses neutral green soap and water to cleanse the field of operation, irrigating with an abundance of boric acid solution, normal saline solution, or 1:8000 mercuric oxycyanide solution.

A small quantity if 1 per cent cocaine, to which a slight amount of adrenalin has been added, is injected over the insertion of the superior and the internal rectus muscles, or, if fixation of the eyeball is below, a small amount is injected over the insertion of the inferior rectus muscle. This method usually requires only a few drops aided by gentle massage through the lids. Less cocaine solution is required than if novocain solution is used.

For inserting a bridle suture to hold the eye downward, it is necessary to inject a few drops of cocaine over the central portion of the superior rectus muscle. Grasping the muscle at this point is always painful, and the ordinary instillations of cocaine or pontocaine are not sufficient to introduce painlessly the bridle suture, as it is ordinarily done, through the central portion only of the superior rectus tendon.

It is also desirable to inject 1 per cent cocaine solution just above the limbus when one does an occasional iridectomy preliminary to extraction of a cataract, in high myopes or for complicated nuclear cataracts. The cornea itself can be anesthetized easily, but the injection of a small amount of cocaine just above the limbus also renders the iris anesthetic. Incidentally, the preliminary iridectomy incision should always be made in the cornea just anterior to the limbus, and the injection above the limbus aids in anesthetizing the iris as well as the cornea.

The question is sometimes asked if injection of the superior rectus alone, without the bridle suture, will not produce sufficient paralysis so that the patient cannot look up, but one must remember the inferior oblique would also have to be completely paralyzed to be certain the patient will "look down" during an operation.

The next step is perfect akinesia or paralysis of the orbicularis and accessory muscles by injection of the superior branches of the seventh nerve. For this a 2 per cent solution of novocain (procaine) is used. Novocain may be boiled freely. It requires about 5 cc. of solution properly to anesthetize or paralyze the orbicularis. The novocain should be in a physiologic sodium chloride solution to which is added 1 drop of 1:1000 adrenalin or epinephrin hydrochloride. Injection should begin just outside the lateral canthal ligament at the orbital margin, with slow injection as a 24 gauge 6 cm. long needle is pushed forward along the upper lid to paralyze the orbicularis, the terminal fibers of the frontalis and the corrugator supercilii in turn. This slowly infiltrated injection produces akinesia of the temporal, malar, and infraorbital branches of the temporal facial division of the seventh nerve only.

It is important in injecting the upper lid to carry the injection well toward the inner angle of the orbit. The needle is withdrawn, and a similar injection is given to the lower lid as far as the region of the infraorbital foramen or notch. About 3 cm. of novocain fluid is used in injecting the upper lid and about 2 cm. for the lower lid.

As the needle is withdrawn, the point is turned, and a small amount is injected backward over the zygomatic region to be sure to catch any stray fibers of the nerve. Only twice in many hundred injections has striking a larger vessel at the upper inner orbital margin produced hemorrhage and ecchymosis. Quick pressure controlled the hemorrhage, and no harm resulted. In making these injections, one does not want to bog the lid unduly so as to interfere with subsequent control of the lid itself during operation. In passing the needle along the lid, if one follows the neighborhood of the margins of the orbit, one is certain to produce sufficient akinesia. It requires a little longer to produce paralysis of the muscle than it does to anesthetize the skin. One should wait until on test it is found that the patient actually cannot "squeeze." If the action of the frontalis and the corrugator supercilii is still too much in evidence and control of the lid is imperfect, it is better to give added injection over the vicinity of the supraorbital foramen or fissure. It sometimes requires as much as ten minutes for complete akinesia. One should not begin the operation until fully assured that it is impossible for the patient to "squeeze." One might mention that preliminary injection for producing akinesia is usually sufficient to do a canthotomy when this is necessary, and it frequently is.

O'Brien's method of producing akinesia is to locate the zygomatic arch with the index finger, push the finger down just anterior to the tragus of the ear to the point where the condyloid process of the mandible is palpable. At this point a 1½ cm. needle is passed down to the condyloid process to a point anterior to its center, and 1 or 2 cc. of 2 per cent novocain is injected. O'Brien emphasized the point that the needle must strike the anterior and not the posterior portion of the condyloid process to produce adequate akinesia. Our experience has shown that the Van Lint method, when the injection is given by assistants, is more generally successful in its results than the O'Brien method, and its only disadvantage is the occasional bog of the lids.

The third step in anesthesia which we wish to emphasize, and which we believe now has a definite and permanent place in cataract surgery, is the use of retrobulbar injection, or ciliary ganglion nerve block. These are not the same. In a true retrobulbar injection, 1 cc. of 2 per cent novocain is injected directly behind the eyeball, blocking the ciliary nerves to produce deep anesthesia of the eyeball. This deep anesthesia of the eyeball is a most desirable and valuable procedure, particularly applicable for cataract surgery, and has been employed by us for all cataract work during recent years. Previously we used it only for enucleation, for acute glaucoma and for retinal detachment. It has not been used for any of the juvenile types of cataract, but is as applicable for traumatic cataracts or cataracts in young adults as in senile cataracts. If the solution is improperly administered and the needle enters a muscle rather than within a muscle cone, it may produce only paralysis of the muscle involved without complete anesthesia of the eyeball. The method of administration is, therefore, important.

While some operators prefer a slightly curved needle (which can be easily made by heating the needle containing the brass wire and bending it to a ⅜ curve), a straight needle ordinarily serves the purpose quite as well. An ordinary hypodermic syringe and a 3 cm. 24 gauge needle are sufficient when one injects through the conjunctiva. If the injection is made through the lower lid so as to avoid contamination from the conjunctiva, a 5 cm. needle is required. After touching the skin with iodine, the injection is made behind the lower cul-de-sac between the inferior and lateral rectus muscles, while the patient looks upward and nasalward, with the point of the needle directed behind the globe toward the optic nerve. It is possible to injure the optic nerve, and one might fear a retrobulbar hemorrhage, but we have seen no evidence of injury of this nerve and have observed proptosis from orbital hemorrhage only once among hundreds of retrobulbar injections. It is desirable for all cataract surgery to have 1 drop of 1:1000 epinephrine solution added to each cubic centimeter of novocain solution. We know by repeated tests that intraocular tension is definitely lowered by retrobulbar anesthesia, providing adrenalin is included in the novocain solution. One is more fearful of insufficient anesthesia in resecting prolapsed iris than when operating for cataract. It is not necessary to inject a large quantity of novocain solution. The injection should be given slowly, beginning after the needle is well behind the capsule of Tenon; when so given it is difficult to conceive how any damage could be done. The addition of

the adrenalin solution distinctly lowers intraocular pressure, but rarely to a point of softness which will interfere with delivery of the lens.

The ciliary ganglion block is also a highly satisfactory method, but not so necessary for cataract work as it is for congestive glaucoma, for enucleation and for retinal detachment surgery. The ciliary ganglion occupies a position just inside of the lateral rectus muscle near the apex of the orbit. Its position is approximately 3½ cm. behind the cornea or 1½ cm. behind the globe. It is almost 4 cm. back of the lateral orbital margin. In giving this injection one should employ a 5 cm. needle and should begin the injection as soon as the point of the needle is along the inner side of the lateral rectus and on a level with the posterior surface of the globe. Although deeper injections as a rule are not employed in cataract work so frequently as those immediately behind the eyeball, when they are given, it is with the belief that there will be less proptosis or less pressure on the posterior surface of the eyeball, which might favor extrusion of vitreous. There is no actual proof of this one way or the other. As a matter of fact, experience leads one to conclude it is less possible to lose vitreous after retrobulbar or ciliary ganglion anesthesia is produced if ordinary gentleness and care are observed. In making retrobulbar injections, one should remember not to start the needle plunger until the needle is at least one centimeter behind the conjunctiva to avoid a ballooning of the conjunctiva and to make the injection slowly.

One might question whether it is necessary to use four instillations of cocaine or pontocaine if one uses retrobulbar anesthesia, but there are certain nerve branches given off from the supraorbital, infraorbital, lacrimal and other nerves around the orbit which go to the conjunctiva and cornea; anesthesia of the ciliary nerves does not completely anesthetize the conjunctiva itself. Retrobulbar anesthesia is particularly valuable also when prolapse of iris requires repair, especially if it is extensive. One must have complete anesthesia of the globe and be assured that the tension of the globe is below normal.

How soon after retrobulbar injection may one begin cataract surgery? Uusually after the retrobulbar injection and providing akinesia is satisfactory, the operation can be begun almost immediately. Another question which may be asked is, "Why give the injection through the lower lid," or, as Jameson and Greenwood advocated, "through the upper lid?" In giving the injection through the lower lid after the method suggested by Friedenwald several years ago, one avoids contamination from the conjunctiva. We have never met with infection following retrobulbar or ciliary ganglion injection. One cubic centimeter of 2 per cent novocain solution, properly placed, will usually suffice for a retrobulbar injection.

Different operators have different ways of anesthetizing the eye for cataract surgery. The methods described have been found adequate, satisfactory and harmless after rather generous experience. There is no excuse for a painful cataract operation. Imperfect anesthesia is the cause of more grief than any other single thing during the operation itself. Retrobulbar anesthesia is definitely advantageous in producing lower intraocular tension. We have come to fear the loss of vitreous less in any type of cataract operation, whether extracapsular or intracapsular, when retrobulbar injection is used. During the past several years with the routine described there have been fewer complications in cataract operations than ever before in our experience.

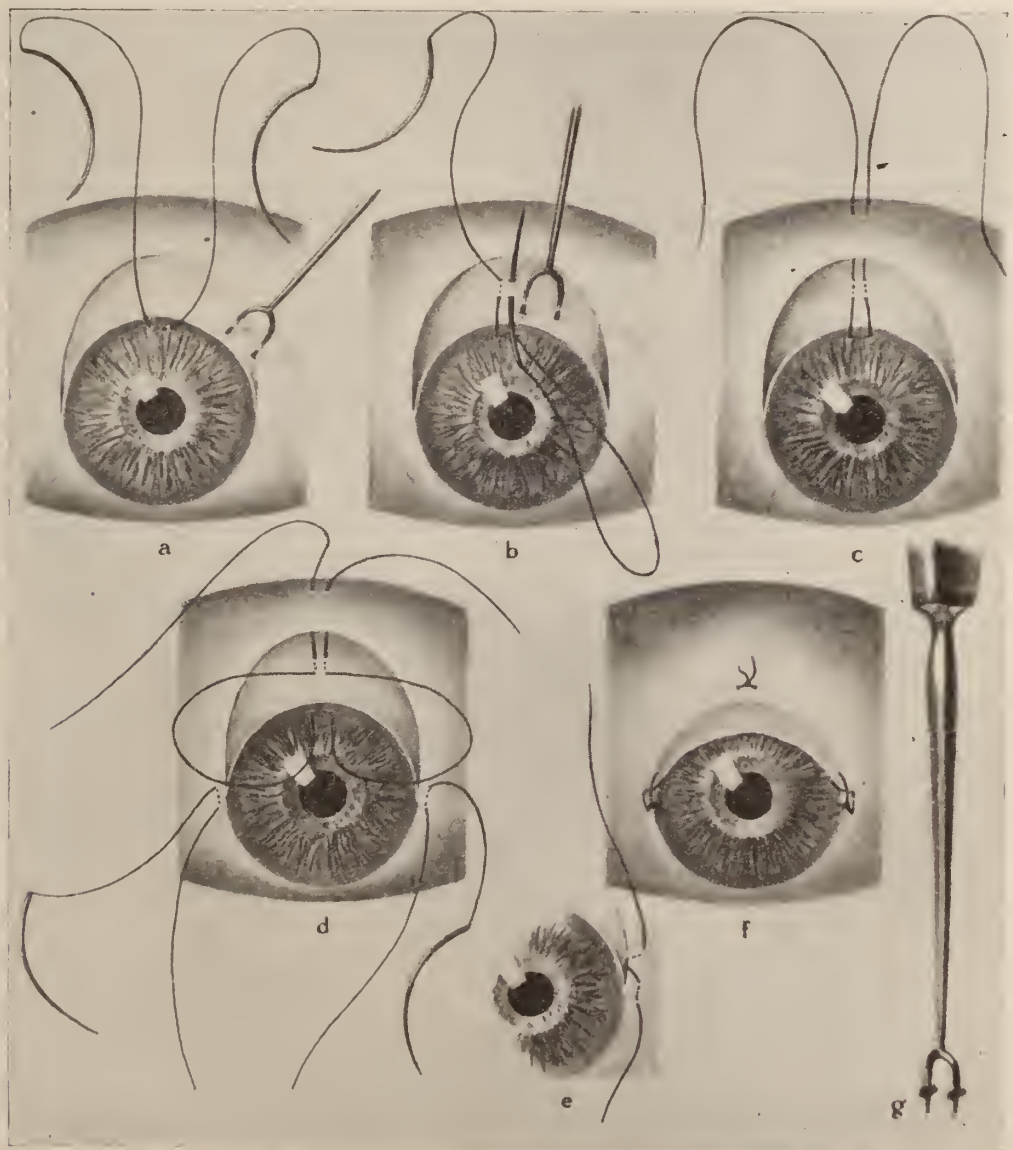
SUTURES

Good suture technic has been developed in the last decade, and suture materials and needles have been improved. Consequently few surgeons do not use them. The reason for sutures is both to prevent the loss of vitreous at the time of operation and to prevent subsequent postoperative prolapse of iris. Sutures not only lend security to the operation, but they also have the great advantage of permitting the patient greater freedom, less restriction and greater comfort, with an easier convalescence. They do away with the necessity of having patients lie perfectly still during convalescence with the head fixed or supported by sand bags and with the fears that something untoward is going to happen if the slightest movement is made. Most surgeons consider them indispensable for intracapsular operations; if they are indispensable for intracapsular extractions, the argument is just as good for classical standardized extracapsular operations. This is true whether a complete iridectomy or a buttonhole peripheral iridectomy is done. Sutures have come to stay. They are not required for preliminary iridectomy.

Much of the advantage of the suture is in the toilet of the wound. One can replace the iris or

its pillars, do small peripheral iridectomies if desired and irrigate the anterior chamber with the safety and assurance that one cannot have without some mechanical means of closing the wound. Prolapse of iris may occur notwithstanding a suture, but in the patient who sneezes, coughs, vomits, or gets out of bed, it is much less likely to occur if a firm suture has been placed. Why sutures are not universally used, or why eye surgeons have been slow in adopting this additional safeguard is difficult to understand. Probably the reason is that it has been considered difficult to introduce the needle through the corneal stroma, but this trick is easy with very little practice, good light, slight magnification and modern atraumatic needles, properly held in the needle forceps.

What type of sutures should be used? Do they ever become infected, since they are exposed externally with the conjunctiva? Do they produce any local irritation? Are they difficult to remove? How many sutures should be inserted? Should they be inserted after the section is completed, or before the section is begun? Shall surgeons limit themselves to conjunctival sutures, corneoscleral sutures, or corneoconjunctival sutures? In answer one may say that they never become infected; they rarely



Corneoscleral suture with conjunctival apron for covering the section. Fixation "pic" enlarged 2x.

cause irritation if fine suture material is used, and they are not difficult to remove if one waits until healing is complete. Davis and Geck atraumatic No. 242 sutures are excellent for cataract work. Those who advocate the use of simple conjunctival sutures argue that corneal wounds heal quickly and simply need the slight traction and easy support of the conjunctiva to aid in the healing process. Some operators merely suture the conjunctiva as close as possible to the limbus after preparing a preliminary circumcision of the conjunctiva a few millimeters from the limbus, and place the sutures before making the section; others place the sutures after making the section. Those who advocate the Kalt corneal stitch, or the Boston corneoscleral suture or Verhoeff's modification of it prefer these methods in the belief that the tighter the wound the quicker the repair, the less the danger of complication and the greater the freedom of the patient.

There is a great variety of suture methods. The ideal suture is one which tightly secures the wound with perfect apposition, without overlap or distortion and at the same time permits covering the section with conjunctiva for protection against infection. Kalt's corneal suture was satisfactory in securing the wound, but Kalt's method was abandoned by us because it did not afford any conjunctival protective covering of the incision. A conjunctival suture method was proposed by Berens; another, the pocket flap method of Hussian, advocated by Lowell and modified by Spratt, involves dissection of a complete conjunctival flap which is turned down over the eyeball, the section of the globe being made beneath the conjunctival flap either with a Graefe knife or with keratome and scissors. We need not illustrate all methods. Choice of methods becomes a matter of individual experience and preference.

With the Van Lint method only the conjunctiva is circumcised from the upper two fifths of the globe and drawn down as a cowl or flap over the incision. It is a simple conjunctivoplasty, holding the wound in apposition without direct support by corneal sutures.

The corneoscleral suture was first advocated in 1854 by Williams of Boston. It has undergone various modifications. The method proposed by Blake of New Haven is an excellent one. It makes a tight wound and may be tied before the anterior chamber is irrigated or the pillars of the iris replaced. The method of taking a horizontal corneal suture with double-armed needles which are passed vertically through episcleral tissue and tied through the conjunctiva from beneath, then reinforced with supplementary Van Lint sutures laterally, completely covers the wound and answers all purposes. This secures a tight wound, and by the supplementary Van Lint lateral sutures one obtains complete coverage. The corneal suture should be placed about 1 mm. anterior to the limbus, through which the section is made. There is some difficulty in placing these sutures if the ordinary fixation forceps is used. For transfixing the eye the scleral fixation "pic" is admirable, and even preferable to fixation forceps. This "pic," made by Mueller and Company, is now on the market. After the corneoscleral sutures are placed and passed through the conjunctiva, they are looped aside for the incision; the ends are laid parallel over the patient's head and are quickly drawn up as soon as the lens is delivered, thus closing the wound and avoiding loss of vitreous. The method should be seen rather than described. For this purpose we have made a moving picture to illustrate the "pic" and the suture methods we employ.

A suture which was proposed by Lindner and slightly modified by McLean is an excellent method, the one objection to this technic being the danger of cutting out the suture when making the incision. To "hit" the preliminary incision, when cutting the last part of the section, especially with the Graefe knife, requires unusual skill, but by using the keratome and enlarging the wound with Aebli's scissors, one is fairly assured against cutting the suture placed across a preliminary cut in the limbus. Its advantage lies in the perfect apposition of the wound. Verhoeff's sutures inserted through preliminary needle tracks also assure one that the lips of the wound will be in exact apposition and that there can be no distortion of the cornea. In our experience Verhoeff's method is more difficult than the corneoscleral conjunctival or the Lindner method.

For all practical purposes, one can safely recommend the silk corneoscleral conjunctival suture method we have used uniformly, in conjunction with Van Lint's akinesia and retrobulbar anesthesia as the best assurance against either or both of the common complications of cataract surgery, loss of vitreous or prolapse of iris.

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THE MANAGEMENT OF SEVERE CRANIOCEREBRAL INJURIES WITH SPECIAL REFERENCE TO COMPOUND AND PENETRATING WOUNDS

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One way to classify craniocerebral injuries is to divide them into open and closed wounds. The latter are observed more frequently in civilian practice and are caused chiefly by automobile accidents and the head hitting blunt objects from falls. In cases of this type the injury of the brain, the subsequent edema and the increase in intracranial pressure, with possible intracranial hemorrhage, are the chief factors which one has to combat in the treatment. Infection in these closed wounds is not as a rule an important complicating factor.

In the present paper it is my purpose to discuss the open wound, the type which may become infected unless it is properly treated in the early stages. Since wounds of this kind are usually penetrating to involve the skull and dura, they are of serious and grave nature. The compound wounds of the vault are always associated with a laceration, or a break in the continuity of the scalp overlying the bone. Various types of instruments may be the offending agents causing these wounds. They may be caused by the pointed edge of a brickbat, hammer or hatchet, the projecting edge of a blunt object or a piece of machinery, a bolt, a doorknob, the edge of the curbing, a knife blade, or flying missiles such as a bullet, a gunshot, or flying metal as in shrapnel wounds. All but the last named are seen in civilian practice, while the shrapnel injuries are seen in warfare. They are also seen in air raids on civilians in wartime, when the exploding bomb causes fragments of metal of different sizes to fly through the air, striking and injuring persons. These pieces of metal may pierce the scalp, skull and brain, and cause severe damage to the tissues in their pathway. Since the shrapnel fragment has an irregular shape, it produces one of the most severe tearing and mangling types of wound of any of the flying missiles.

The tissues involved may be those of the scalp, skull, and brain, and all three may be involved at the same time. The wound is said to be penetrating when the foreign body enters the skull to involve the dura and brain. When the bullet or other foreign material enters and leaves the skull after passing through the cranial cavity, it is said to be perforating. In either the penetrating or perforating type the wound may be single or multiple. Occasionally a flying missile strikes the skull diagonally and ricochets from the skull so that the patient may have two scalp wounds, one of entrance and the other of exit. If the skull is exposed in this type of wound, the outer table may appear to be only slightly damaged. On further investigation, however, one may find a severe comminution with depression of the inner table of the skull and adjacent contusion or even laceration of the dura and brain. This is a gutter type of wound which may be caused by a bullet striking the skull tangentially.

Since these are compound wounds, they requite a surgical procedure to carry out the proper treatment and to prevent infection. The best time to do the operation is as early as possible after the receipt of the wound, but this depends upon the condition of the patient when he is first examined. Sometimes he is in shock, and the operation should be postponed. Some of the signs of shock may be a lowered blood pressure, a fast, weak, irregular pulse, irregular sighing respiration, pallor and coldness of the skin, and suppression of the mental faculties. If these symptoms are present, it is urgent that the patient be treated by the usual measures for overcoming surgical shock. As a rule the patient will respond within the first six hours after proper treatment. If he does not respond, he probably has a severe injury of the vital centers, and operative treatment would be of no avail. At times the patient responds slowly, and often it seems wise to postpone the operation for twenty-four hours after the injury. While it is best to perform it sometime during the first twelve or sixteen hours, satisfactory results have been obtained in selected cases by waiting twenty-four hours. The greatest danger of delaying the operation is the risk of infection. On the other hand, the delay is favorable in that it makes the operation and the control of fresh bleeding much easier by allowing the clot to form and firmly plug the bleeding vessel. The objection to the early operation in some of the severe penetrating and perforating wounds of the brain is dislodging the clot and stirring up a severe deep-seated hemorrhage, which is difficult to control. By delaying the

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operation twenty-four hours there is less danger of causing a fresh severe hemorrhage if one is gentle in his manipulation and treatment.

The operation may be delayed if the patient appears to have a rapidly fatal type of injury from the beginning. In this type of injury he is in deep coma and cannot be aroused on stimulation; the respirations are irregular in rhythm, deep and stertorous, while the blood pressure is normal or even high. It is best to watch this patient for a while and treat him conservatively even though he may have a deep-seated intracranial hemorrhage, which he likely has if there is a perforating wound of the skull and brain. The chances of controlling it and repairing the damage by an early operation are usually slim and the prognosis hopeless. If the patient overcomes the initial shock and compression by delay and conservative management, the operation can just as well be performed at some later date, preferably during the first twenty-four hours.

At operation the first step is the proper treatment of the lacerated wound of the scalp. It is important that all lacerations of the scalp be treated in a manner here described. An infection of the scalp following inadequate primary treatment may result in a serious complication, such as osteomyelitis of the skull, meningitis, or even abscess of the brain. In all cases of scalp wounds the hair should be clipped short and the scalp shaved over a wide area around the laceration. The scalp is painted around the edge of the fresh wound with a suitable standard antiseptic solution. A 1 per cent solution of novocain with 2 drops of adrenalin to the ounce is then injected into the scalp around the laceration so as to encircle it. By this means the wound is made completely insensitive. Then it may be washed thoroughly with sterile soap and water, and irrigated with a large quantity of normal salt solution to clean it of all foreign material. It is further debrided by excision of the ragged torn edges of the laceration with a sharp knife and by making an incision well into normal healthy tissue. When debridement is completed, the instruments which were used in making the incision are discarded, and hemostats are applied to the galea, or skin clips may be used to control the hemorrhage from the scalp.

The bone is uncovered, and one has to deal with the depressed fragments which are usually comminuted and driven into the cranial cavity. It is not unusual to find hair, pieces of clothing, or other foreign material imbedded with the bone fragments through the torn dura into the brain. Sometimes it is possible to bite away some of the bone with rongeurs to free the depressed fragments. It is, however, most frequently necessary to drill a hole and enlarge it with bone-biting forceps in order to insert an elevator and raise or remove the depressed fragments in order to make a proper examination of the underlying dura and brain. It is also necessary to make a thorough exploration of the inner table of the skull for a distance around the margin of the wound. There may be more fragments of bone with depression from the inner table than are evident from inspection of the external surface. Unless one has a fairly large opening, it will not be possible to remove these remote depressed fragments of bone. The fragments of bone which have been removed may be preserved and kept in a sterile container, since they can be put back in the cranial defect in a mosaic pattern to act as a bone graft for repair of the defect. Before the days of chemotherapy the surgeon never put these loose fragments of bone back in compound injuries of this type because of the danger of infection. He always, however, replaced fragments of bone attached to soft tissue in compound wounds and reinserted loose fragments of bone in the simple depressed fractures with good results. Now even though the wound is contaminated, the loose fragments of bone may be reinserted and a large quantity of sulfanilamide powder packed about them when the wound is closed. It is advisable that the patient be given one of the sulfanilamide group of drugs by mouth until the danger of infection is over. A prophylactic dose of tetanus antitoxin should be given during the first twenty-four hours.

The most important consideration in the treatment of compound wounds of this nature is the proper care of the laceration of the dura and the underlying injury of the brain. One or more fragments of bone or indriven foreign body may have lacerated the dura and brain. This injury may be manifested when the wound is first treated by pulpified brain tissue extruding through the laceration of the scalp. The opening in the dura may have to be enlarged so as to get adequate exposure of the injured portion of the brain. The wound in the brain is thoroughly irrigated with Ringer's solution, which washes away loose, devitalized pieces of brain tissue together with clots or other foreign material deposited in the wound.

Two of the greatest additions to neurologic surgery in the past fifteen years have been the use of suction and electrosurgery. By means of suction it is possible to remove nearly all of the devitalized soft tissue, blood clots and other foreign material so that one can see into the depth of the wound and repair the damage as far as possible. Likewise, all bleeding points can be picked up easily and coagulated with the electrosurgical unit, or an artery of good size can be controlled by means of a silver clip. By a thorough debridement of the wound removing nonviable tissue and blood clots, it is possible to minimize the formation of a cicatrix in the brain and thereby lessen the danger of convulsions. It is important to close the dura tightly, preferably using interrupted silk sutures. One should never pack the brain with gauze, and practically never is it necessary to use a soft rubber tissue drain inside the dura. The wound may be thoroughly packed with sulfanilamide powder, which is used extradurally. The scalp wound should be sutured in two layers of interrupted silk, one for the galea and the other for the skin. As stated before, no drainage should be used except in rare instances, and then extradurally.

In wounds of penetrating and perforating types caused by bullets and other flying missiles the same principles of treatment with slight modification should be used. The scalp wound of entrance is usually small, round and more or less like a puncture wound. There may or may not be a wound of exit. If one is not found, it may be assumed that the bullet or other causative foreign agent is somewhere imbedded in the cranial cavity. It is necessary in most cases that the patient be examined roentgenologically before operative treatment is undertaken, so as to determine the direction and the location of the foreign body. In case it has lodged in some accessible place, it is important that its accurate localization be marked off on the scalp under the fluoroscope, which will facilitate its removal.

The surgical treatment of these wounds consists of thorough debridement of the wound of entrance as previously described. The skull opening may be slightly enlarged by removing the edge of bone. There are usually indriven fragments of bone carried into the brain substance for one, two, or three inches. The principles of treatment of penetrating wounds of the skull and brain as laid down by Cushing during the first World War hold good today. By means of a soft rubber catheter passed into the tract of the bullet, through which is irrigated Ringer's solution, it is possible to remove loose, pulpified brain tissue, blood clots, pieces of bone and frequently fragments of bullet lying in the pathway. Occasionally it is possible to remove the main fragment of bullet should it not be too deeply situated. It is possible to feel the bullet and fragment of bone against the end of the catheter, and the palpation of a gloved little finger in the tract of the bullet may facilitate the removal of this foreign material. After removal of the debris and thorough cleansing of the brain wound the dura should be closed tightly. Should the dura have lost in substance, it may be repaired by using a graft of fascia taken from the neighborhood of the wound or from the fascia lata. The scalp wound is closed firmly as previously described without drainage. It should be mentioned here that drainage beneath the dura should never be allowed.

If the bullet wound has perforated and gone entirely through the skull and brain to the opposite side, the wound of exit should be debrided and handled in a similar manner to that of the wound of entrance. Should the bullet be lodged in the cranial cavity at some accessible place near the surface, one may remove it by making an opening over the point nearest the bullet. This should previously have been determined by localization under the fluoroscope and by making suitable marks on the scalp. By means of a small incision of the scalp under local anesthesia over the determined location of the bullet, a button of bone about 1 inch in diameter is removed with a trephine and the button of bone saved so that it may be later reinserted into the wound. The dura is then opened by means of a crucial incision or by a small flap. One can now usually see the contusion or laceration of the cortex at this point where the bullet is located. By inserting a small needle one can feel and locate the bullet and remove it with little damage. The dura is then closed, the button of bone replaced and the scalp wound repaired in the manner previously described. In some cases it has been deemed advisable to turn down a small bone flap overlying the bullet so as to give a wider field of exposure encircling the bullet.

It is not always advisable nor necessary to remove the bullet or metallic foreign body deeply lodged in brain tissue. Removal will depend largely on the location of the bullet and whether

it would cause more damage to the brain to remove it than to leave it alone. It is said that the objection to leaving a bullet in the brain is the danger of convulsions. This theory may be refuted since it has been shown by Ascroft[1] from experience with wounds of the brain in the first World War that when the bullet or shrapnel was removed from the brain, there was a slightly higher incidence of convulsions than when it was left in place. This greater frequency would seem to bear out the fact that the act of removing the bullet may cause damage and a more irritating scar than if it were left undisturbed. On the whole it might be stated that if the bullet involves the cortex, especially near the motor area and close to the fissure of Rolando, it should be removed, as the incidence of convulsions is much greater when this important structure is involved.

It is important to mention the possibility of convulsions in connection with depressed fracture of the skull. In all depressed fractures no doubt the greatest damage has been done at the time the injury was received. It is believed by one school that all depressed fractures of the skull should be elevated since the continued depression may further damage the brain and thereby predispose to convulsions. There is another school, however, which claims that further damage is not caused by this slight depression of bone. This hypothesis is partly substantiated by the experimental work of Naffziger and Glaser,[2] who showed in animal experimentation that indentation of the skull or the insertion of a foreign material between the skull and the dura over a long period of time causes no structural change in the underlying cortex of the brain. Wagstaffe[3] reported that in the cases included in his series the incidence of convulsions in depressed fracture of the skull with intact dura was 1.6 per cent, while with laceration or penetration of the dura it was 18.7 per cent. In most depressed fractures of the skull, even though the outer table appears to be only slightly depressed, one usually finds the inner table comminuted and the loose fragments may be on the edge or even cause a penetration of the dura. Should the dura be penetrated and the brain cortex severely contused, pulpified or lacerated, it is important that a suitable repair be made to these structures. It stands to reason that if depressed fractures are repaired, the devitalized and pulpified brain tissue removed, the blood clots sucked away and the dura sutured, there will be less danger of an adherent fibrous scar and less danger of convulsions. Consequently it is believed that all depressed fractures of the skull should be explored and elevated, especially when they overlie important parts of the brain cortex and functional centers.

A word may be given in regard to the edema of the brain and the increased intracranial pressure which may follow any severe trauma of this organ. The usual dehydrating measures are used as indicated, and one of the principle means in this line is the proper limitation of the intake of fluid. The patient is rarely allowed over 1,500 cc. of fluids in the first twenty-four hours. It is seldom that a hypertonic solution of glucose or sucrose has to be administered, but in case one is used, it is usually the latter. It is customary to give 100 cc. of a 50 per cent solution of sucrose at a dose. Magnesium sulfate, given by mouth or by rectum, may be used for this purpose.

As a sedative paraldehyde, administered either by rectum or by mouth, is preferable, but one of the barbital group of drugs may be used. One should not use morphine or an opiate unless the milder sedatives have failed to quiet the patient.

Spinal puncture should not be used in the treatment of open and compound wounds of the brain because of the danger of spreading the infection. When there are frank signs of a diffuse subarachnoid infection, it may be done for the purpose of making a diagnosis.

REPORT OF CASES

Case 1.—D. P., a white man aged 35, was admitted to Riverside Hospital on Oct. 4, 1941, with a compound depressed fracture on the left side of the frontal bone through the sinus. The internal plate of the left frontal sinus was pushed back ¾ inch. Generalized convulsions occurred after the patient was admitted. The operation, two hours after admission, consisted of debridement, removal of a loose piece of bone and elevation of the attached fragments. The wound was packed with sulfanilamide powder, and the sinus was packed. The packing was removed in five days. The wound healed by primary union. The patient made a good recovery and was discharged on October 25. He went back to work in three months. There were no residuals.

Case 2.—C. P. W., a white man aged 58, was admitted to St. Luke's Hospital on March 10, 1940, after having been hit on the head with a hammer five or six times at 11 p. m. on the day of admission. He was dazed and had weakness of the right leg since that time. Roentgen examination showed a comminuted depressed fracture of the skull in the parietal region on the left side. A diagnosis of compound depressed fracture of the skull in this region was made. At operation, three hours after the initial injury, under local anesthesia the laceration of the scalp was debrided over the depressed fracture of the skull ½ inch in depth. By making a drill hole beside the depressed area the fragments of bone were elevated and removed. The dura was intact. The wound was closed with silk. Following the operation the wounds healed primarily. The paralysis of the right leg im-

improved, and the patient was discharged on April 7, four weeks after the operation.

Case 3.—P.G.S., a white man aged 20, was admitted to St. Luke's Hospital on July 13, 1938. He had been in a motorcycle-automobile accident, in which he was rendered unconscious and received a laceration in the parietal region of the head on the right side. He was seen four days after the injury when he was conscious and showed no objective neurologic signs. Roentgen studies of the skull made two days after admission revealed a depressed fracture of the skull over an area 2 inches in diameter in the parietal region. The depression was ¾ to 1 inch in diameter. After ten days had elapsed with no signs of infection, the operation was performed. The ragged laceration which was partly healed was excised. The depressed fragments of bone were elevated and removed. Some depressed fragments which were attached to soft tissue were elevated and left in place. The dura was found intact. The wound was closed with catgut and silk, and it healed by primary intention. The patient made an uneventful recovery and was discharged on August 7, twenty-five days after admission.

Case 4.—J.M., a negro man aged 51, was admitted to the Duval County Hospital on August 31, 1936, with a history of having been struck on the right side of the head by a broom handle. He was unconscious. Roentgen examination of the skull showed a stellate fracture in the parietal region on the right side with a depression of 1 inch over an area 1½ inches in diameter. The operation, twenty-one hours after the initial injury, consisted of debridement of the laceration of the scalp, removal of depressed fragments of bone, repair of tears in the dura and removal of devitalized pieces of brain tissue. The wound was closed with silk. The patient made an uneventful recovery and was discharged from the hospital on October 4, approximately one month after the injury.

Case 5.—J.T., a white girl aged 13, was brought to St. Luke's Hospital on May 1, 1939, following injury received when she was struck by an automobile. She was seen in the emergency room soon afterward and appeared conscious, but she was dazed. There was weakness of the right side of the face and of the right arm. A long curved laceration of the scalp extended from the frontal to the occipital region on the left. In the parietal region on that side over an area 3 inches in diameter was a depressed fracture of the skull. In the temporal region on the same side was another 3 inch laceration with a comminuted depressed fracture of the skull and laceration of the dura and brain. The blood pressure was 110 systolic and 70 diastolic. The patient was taken to the operating room immediately, and under local anesthetic the lacerations of the scalp were debrided, the loose fragments of depressed bone were removed, and some which were attached were elevated. Loose fragments of brain tissue were washed away, and the dura was repaired. The scalp wound was closed with silk. Her progress after the operation was uneventful. The wounds healed by primary union. She had temporary aphasia and weakness of the right side, but they had cleared up and she was walking when discharged on June 4, approximately one month after the operation. A roentgen study of the skull was made three weeks after the operation which showed the cranial defect 3½ by 5 cm. in the temporal region on the left side with a fragment of bone 2½ cm. square in the center of the defect, which was in good condition.

Case 6.—J.L., a white man aged 29, was admitted to St. Vincent's Hospital on Aug. 13, 1939, after his head had been struck in an automobile accident while he was asleep with his head lying on his right arm partly out of the window when his car was side swiped by another. He was unconscious for a short time. Examination revealed a laceration of the frontal region on the right side. There was slight weakness of the lower portion of the face on the left side; weakness of the left arm was also noticed. The tendon jerks were active on the left side. Roentgen examination demonstrated a comminuted depressed fracture of the skull involving the entire frontal bone on the right side. At operation the entire frontal half of the skull on the right side was found to be depressed, and the dura and frontal lobe were lacerated. Elevation of the bone and repair of the dura were carried out; the many pieces of bone were replaced in a mosaic pattern. The scalp wound was closed with silk. The patient was making an excellent recovery and was discharged three weeks later on September 5. He was readmitted on September 8 and discharged again on October 6 after having had pneumococcic meningitis. Cure was effected by sulfapyradine therapy and spinal drainage. He has since had several convulsions.

Case 7.—W.B., a white boy aged 13 months, was brought to St. Vincent's Hospital on Jan. 18, 1940, with a history of having been struck by a train while playing on railroad tracks. He had received a compound comminuted depressed fracture of the skull in the frontal and parietal regions on the right side. The scalp wounds had been closed with skin clips by the home physician. The patient was unconscious and in shock when examined. The operation, performed twenty-four hours after the accident, consisted of debridement of the scalp wound, elevation and removal of depressed fragments of bone with removal of coal dirt and other foreign material, and cleansing and repair of the lacerated dura and brain. The wound became infected, and osteomyelitis of the skull developed. On February 24 an operation was performed for removal of sequestra and drainage of an extradural abscess. On March 5 an abscess of the right frontal lobe was drained. There developed a brain fungus in the frontal region on the right side and the patient expired on May 20. It would have been better if this patient could have been operated on during the first few hours after the injury.

Case 8.—J.P.S., a white man aged 22, was admitted to St. Vincent's Hospital on Jan. 19, 1937. He had been injured when the lid from a dump truck fell and struck him in the temporal region on the left side of the head rendering him unconscious and causing a compound, comminuted depressed fracture of the skull in this region with laceration of the dura and brain. Examination showed that the patient was semiconscious and appeared aphasic. Roentgen studies of the skull showed a severe comminuted depressed fracture of the skull in the temporal region on the left side about ½ inch in depth. The operation, performed about four hours after the injury, consisted of debridement of the wound, elevation and removal of loose fragments of bone, repair of the laceration of the dura and removal of devitalized loose fragments of brain and blood clots. The wound was closed with silk and healed by primary union without infection. The patient had a rather stormy time with increased intracranial pressure and edema of the brain, but this condition was kept under control by dehydration and spinal puncture. He was discharged from the hospital showing great improvement on February 11, three weeks after the operation. He returned to work, but has had several convulsive seizures since then.

Case 9.—G. G., a white man aged 33, was admitted to St. Vincent's Hospital on Oct. 20, 1936. He had been injured two and one-half months previously while pumping an automobie tire which blew out, causing the rim to strike his head, thereby producing a compound depressed fracture of the skull in the frontal region on the right side which rendered him unconscious. The wound had been draining since the injury. The patient felt well otherwise, and neurologic examination gave essentially negative results. Roentgenograms of the skull showed depressed fractures of almost the entire frontal bone with overlapping of the edges and a depression of ½ inch or more. At the upper part there was erosion of bone sug-

gesting osteomyelitis. A diagnosis of osteomyelitis of the skull and an old comminuted depressed fracture of the frontal bone on the right side was made. At operation on October 21 sequestra and depressed fragments of bone were removed. The dura looked intact and healthy. The blood Kahn test gave positive results and the patient was put on specific treatment. On discharge from the hospital on November 9, three weeks after the operation, he was making a good recovery, and the wound was almost completely healed. This complication probably could have been prevented by debridement during the first few hours after the injury.

Case 10.—G. C., a negro man aged 34, entered the Duval County Hospital on Nov. 15, 1939. He had been stabbed in the head, and the knife blade had broken off in the skull. Examination revealed a broken knife blade protruding from the scalp at the vertex. A roentgenogram of the skull showed a knife blade 1½ inches in length broken off and penetrating the skull with a recent depressed fracture of the skull. There was also an old depressed fracture posteriorly and mesially. At operation twenty-four hours after the injury the wound was debrided, and a drill hole was made beside the knife blade wound. The bone was nipped away with rongeurs so as to dislodge the knife blade and to remove it. It had penetrated the dura and brain substance. The dura was repaired, and depressed fragments of bone were removed. The wounds healed without infection. There developed no paralysis nor neurologic disturbance. The patient was discharged from the hospital on November 28, twelve days after the operation.

Case 11.—J. DeW., a white boy aged 8, was admitted to St. Luke's Hospital on July 25, 1936, following an automobile accident in which he received a laceration of tbe scalp behind and above the left ear. He was unconscious and remained so for several days. He had pyramidal tract signs on the right side. Roentgen examination of the skull showed a depressed fracture area in the posterior temporal region on the left side with a retained metallic foreign body. There was also a fracture of the left femur. The patient was operated on four hours after admission. The laceration in the temporal region on the left side was debrided, and a metallic foreign body 2 inches long from a door handle was removed. It was lying on a depressed comminuted fracture of the skull. The depressed fragments of bone were removed leaving a cranial defect 2 cm. in diameter. The dura was intact. The wound was closed with silk. The patient remained unconscious and showed increasing signs of intracranial pressure with paralysis developing on the left side. On the sixth day after admission an exploratory operation and decompression were done in the temporal region on the right side revealing bloody fluid and some clots, which were removed. Following this operation the patient gradually improved by the use of dehydration and spinal punctures. The operative wounds healed primarily. He was discharged from the hospital on September 12, about seven weeks after admission, having made a satisfactory recovery.

Case 12.—T.M., a white man aged 36, entered St. Vincent's Hospital on April 18, 1940, with a self-inflicted bullet wound of the right side of the head. There were two small round wounds in the parietal region on this side 1½ inches apart. The patient was either unconscious or appeared aphasic. Rigidity and weakness of both arms and legs were noted. Roentgenograms of the skull showed in the parietal region on tbe right side an irregular opening in the skull 1 cm. in diameter with a bullet lying in the parietal region on the left side about ¾ inch from the inner table of the skull. There were bullet fragments and pieces of bone in the bullet tract near the wound of entrance. The operation, performed four hours after admission, included debridement of the wound of entrance, removal of fragments of bone, irrigation of the tract of the bullet removing pulpified brain tissue and blood clots, and plastic repair of the dura. The wound was closed tightly with silk. A trephined button of bone was removed from the parietal area on the left side, and the bullet was removed from beneath the cortex. The button of bone was replaced, and the wound was closed. The wounds healed primarily. Neurologically the patient showed only slight improvement in the quadriplegia. He was discharged from tbe hospital six weeks after the operation.

Case 13.—B.P., a negro woman aged 44, was admitted to the Duval County Hospital on November 26, 1937, after receiving a bullet wound on the right side of the head with the bullet lodging on the left side. She was conscious on admission and there was hemiplegia on the right side. Roentgenograms showed the wound of entrance in the skull in the parietotemporal region on the right side and the bullet lying on the left side in the occipitoparietal region. The operation, twelve hours after the injury, consisted of debridement of the original wound of entrance on the right side and washing out the tract of the bullet. A small button of bone was removed from the parietooccipital region on the left side, and an effort was made to locate the bullet with a needle without results. The wound was closed without locating the bullet. The patient expired on November 28, two days after admission.

Case 14.—D.S., a negro woman aged 30, was brought to the Duval County Hospital on Dec. 2, 1938, after she had received a pistol bullet wound of entrance in the parietal region on the left side, the bullet lodging anteriorly near the midline beneatb the frontal bone. The operation was performed fourteen hours after the initial injury. The wound of entrance was debrided, loose fragments of bone and pieces of bullet were removed, and loose fragments of brain tissue and blood clots from the tract of the bullet were washed away. Plastic closure was made of the wound. The main fragment of the bullet, lying in the frontal region on the right side, was removed by making a small bone flap and opening the dura in this region. The bullet was found and removed just beneath tbe cortex. The wounds healed without infection. The patient was discbarged from the hospital on Jan. 3, 1939, about five weeks after tbe date of admission.

Case 15—R.B., a white boy aged 16, was admitted to Riverside Hospital on March 3, 1938. On the preceding evening he had been sbot by a small caliber bullet in tbe parietal region on tbe left side. Tbere was no wound of exit. He was paralyzed on the right side and was aphasic, but not completely unconscious at any time. The operation, performed at 2:30 p.m. on the day of admission consisted of debridement of tbe wound of entrance, removal of a fragment of bone and pulpified brain tissue with blood clots from the wound, and removal of one large fragment of bullet and several smaller ones. The wound was closed with silk and healed primarily with no infection. The paralysis and aphasia were improving when tbe patient was discharged on March 13.

Case 16.—E.A.S., a white man aged 32, entered St. Vincent's Hospital on Dec. 3, 1939. On November 9, or about a month previously, he had been sbot in the right temple, losing the sight of the right eye. He was able to walk at first, but two weeks later became weak in all extremities, more especially the legs. Roentgenograms of the skull taken following his admission to tbe hospital showed a bullet wound of entrance in tbe temporal region on tbe right side just lateral to tbe right orbit and the main fragment of bullet lying on the right side near the falx about 3½ inches back of the internal plate of the frontal bone. Several small metallic fragments and bony fragments were seen near the tract of the bullet. Tbe operation on December 7 consisted of trephination over the frontal region on tbe right side and removal of the bullet near the surface. The bullet was easily found after making a short incision in the cortex where pulpified brain tissue was found in the tract of the bullet. The button of bone was

replaced, and the wound was closed. The wound healed, and the patient was making a good recovery when he was discharged from the hospital on December 24, two and a half weeks after the operation.

Case 17.—C.K., a white man aged 21, was admitted to St. Luke's Hospital on June 16, 1937, with a history of having been shot accidentally with a 22 caliber rifle. He was unconscious. Examination showed a wound of entrance of the bullet in the frontotemporal region on the left side and paralysis on the right side. A roentgenogram of the skull showed the wound of entrance in the skull in the frontotemporal region on the left side passing backward to the occipitoparietal region on the right side. Fragments of bullet dust and bone were seen in the tract of the bullet. The bullet was localized under the fluoroscope. At operation, eight hours after the patient was admitted, the wound of entrance was debrided, loose fragments of bone were removed and by irrigation of the tract of the bullet through a catheter loose fragments of brain tissue and bone, and fragments of the bullet and blood clot were removed. The wound was closed with silk. Then an incision was made over the temporoparietal area on the right side, and a button of bone was removed with a trephine. The dura was nicked where it had been struck by the bullet. Pulpified brain tissue and blood clots were washed away. The lead mass of a 22 caliber bullet was found and removed. The dura was repaired, the button of bone was replaced, and the scalp wound was closed with silk. The patient remained unconscious. Paralysis developed on the right side, and there was evidence of massive brain damage. He died on June 26, ten days after the initial injury.

Case 18.—C.E.W., a white man aged 20, was seen in consultation with Dr. J. R. Chappell on Oct. 10, 1941, at the Orange General Hospital, Orlando. He had received a bullet wound of entrance in the parietooccipital region on the left side which rendered him unconscious immediately and he had remained so ever since. The examination showed that the patient was unconscious, but could be aroused slightly and was apparently aphasic. He was said to have had weakness in the right arm and leg. Roentgenograms of the skull showed the wound of entrance in the parietooccipital region on the left side with many indriven bone fragments and bullet dust in the tract, with the main fragment of the bullet lying in the frontal region on the right side. The operation was performed about seven hours after the initial injury under local anesthetic and consisted of debridement of the scalp wound of entrance, enlargement of the bony opening and removal of bone fragments, loose devitalized brain tissue and blood clots in the tract of bullet, by means of irrigation of normal salt solution through a rubber catheter. A plastic closure of the wound was then left undisturbed as it would require another operation to remove it, and this did not appear urgent at the time. The patient made satisfactory progress following the operation, according to reports from Dr. Chappell, and recovered sufficiently to be discharged from the hospital sixteen days after the operation. From last reports about two months postoperatively he was walking, had weakness of the right arm and was aphasic. He will no doubt continue to improve, but it is too early to state how nearly complete recovery will be.

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DISCUSSION

DR. W. DUNCAN OWENS, Miami Beach: I wish to compliment Dr. Lyerly upon his interesting and timely presentation and to thank him for the opportunity of discussing it. He has so completely covered his subject as to leave little room for discussion; so it seems my role needs must be mainly to emphasize certain points to which he directed attention.

Perhaps the most important fact to be borne in mind is that operation, an absolute obligation in open craniocerebral injuries, not only may with safety be delayed many hours but frequently must be so postponed if one is to give the victim his best chance for recovery. Cushing's rule "all or nothing" will often necessitate delay in order to transport patients with such injuries to the proper place for operation; it is far better that they be untreated, except for shock and the application of sterile dressings, for hours or even days than that they be subjected to operation which must necessarily be incomplete because of the lack of proper equipment or trained personnel. The degree of unconsciousness is probably the best guide to the length of time the operation may be delayed; shock, if present, demands delay until the desired response is obtained to antishock therapy. If unconsciousness is so profound that it is impossible to arouse the patient even by the application of painful stimuli, operation will probably be of little avail; if this extreme degree of unconsciousness is not overcome by conservative measures, the patient is probably doomed. So, too, in shock; if it is not successfully combated, operation will only serve to push the patient over the edge upon which he is already teetering.

In spite of the fact that these are always infected wounds and that unnecessary delay is culpable, the interval of waiting is far from wasted. During this time prophylactic doses of antitetanic and anti-gas gangrene serum should be given, and sulfonamide therapy should be begun. Here it is well to recall that sulfathiazole is the least effective of the sulfonamides in the cerebral system because of its poor secretion by the cerebrospinal fluid. Scalp bleeding should be controlled. In cases of penetrating wounds localizing roentgen examination should be made. The typing of blood, obtaining donors and plasma, and cross-matching all take time, and this is the period in which to prepare for their use in case of necessity.

Although local infiltration anesthesia is the choice, some of the patients come to operation in an extremely restless state. In these cases it is well to use avertin by rectum in quieting doses and to use local anesthesia also.

Recalling the potentialities of infection in these wounds, one realizes the necessity of careful and full debridement not only of the scalp but also of the fragmented cranium. In debriding the cranium when one deals with depressed fragments, it is far wiser to avoid possible further injury to underlying structures by elevating the fragments through nearby burr holes than by attempting simple elevation or by nipping away edges of bone with rongeurs to free the depressed fragments. Removed fragments should be thoroughly washed in Ringer's solution and kept for replacement together with a quantity of sulfanilamide powder. Though it is not essential to replace these fragments, especially in small defects, they certainly serve a useful purpose in the eventual repair of the defect and enable one to avoid subsequent operative repair necessary in many instances prior to the advent of the sulfonamides.

Saving of all the dura possible so as to secure watertight closure of it is all important. Although Browder advised that a water-tight closure of the galea is preferable to the use of "foreign material," I take it that he does not object to autogenous grafting of fascia. Certainly if a mosaic of bone fragments is to be replaced, none of it should rest upon brain tissue. Undoubtedly the galea should be closed water-tight by means of many interrupted silk sutures so that it will compensate for small leaks through the dura or graft, but by all means one should make every attempt to close the dura snugly, using grafts if necessary.

All injured and devitalized brain tissue together with any possible foreign bodies should be removed by suction and alternate suction and irrigation with Ringer's solution through a small rubber catheter. It is surprising what can be removed in this manner. It is well to mention in this connection that instrumental search for deeply indriven foreign bodies should never be made. Deep-lying foreign bodies should be left unless localizing signs or symptoms are of sufficient importance to outweigh the possible damage to be inflicted by their attempted removal. Gentleness, even in the use of the soft catheter, is of paramount importance. The catheter should be allowed to follow the track of the missile rather than be pushed into it. Injuries to undamaged brain tissue will thus be avoided, especially to the ventricles, which, if unopened, should be left unalterably so. Even the present day free use of the sulfonamides has not allayed the fear of opening the ventricles in the presence of trauma.

Complete hemostasis in all surgery is an end to be desired; in surgery of the brain it is obligatory. Wounds involving the sinuses are apt to be particularly bloody and the bleeding hard to control. If a fragment of bone is depressed over a sinus and there is no free hemorrhage, it should be left alone for fear of tearing into the sinus. Bleeding from a sinus can be controlled by the use of pulpified muscle graft, dural transplant, or even by packing the sinus or by tying the torn ends.

In wounds involving the paranasal sinuses thorough debridement and chemotherapy are the main reliances. Chemotherapy should be used unsparingly both in the wound and orally or parenterally until the danger period of infection has passed.

In spite of careful preoperative conservatism, rigid debridement, gentle but thorough technic at operation and the wise use of chemotherapy, occasionally meningitis will occur, perhaps more frequently post-traumatic brain abscess, acute or chronic, and possibly still more frequently wound breakdown with resultant protrusion of a brain fungus and the development of cranial osteomyelitis. Since these are all complications or part of the aftermath of the scope of this discussion, they are mentioned only in the attempt further to emphasize points previously brought out.

It is not amiss, in a final word, again to warn against the use of narcotics and lumbar punctures in the postoperative care of compound craniocerebral injuries. Almost certainly unnecessary deaths have occurred by more deeply depressing with narcotics the already severely depressed brain. Certainly it is possible to spread by lumbar puncture any infection present.

DR. LYERLY (concluding): I want to thank Dr. Owens for his discussion, for bringing out some of the points which I did not have time to bring out, and for emphasizing those already stated.

I think when the patient has too severe an injury, or a complicating injury elsewhere in the body, and there has been a laceration, in which case one does not have to make an immediate repair, that operation might be delayed for several days by packing the wound immediately with sulfanilamide powder and leaving the wound open. But cases of this type are exceptional. Most cases must be treated by debridement within the first twenty-four hours.

Regarding sulfonamide drugs, I think the best one to be used is sulfadiazine. I do not use sulfapyridine or sulfathiazole in the more recent cases. When there is intracranial infection, I think sulfadiazine is the best.

In these cases the patient is operated on under local anesthesia in most instances.

After operation, in cases in which it is necessary to leave a cranial defect, one has two choices, to do a bone graft or use some foreign material such as a plate. Personally, I prefer the celluloid plate, although some metallic plates are satisfactory. The former is tolerated well in these defects if the wound is clean. Foreign material should not be used in the repair of compound wounds during the first six months at least after operation, because there may be some latent infection.

It is important that the dura be closed tightly by using a graft from the temporal fascia or galea if necessary. The dura is a great barrier to infection, should it develop in the scalp wound. If the dura is closed, serious intracranial complications may be prevented.

THE MECHANISM OF VERTIGO

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CLEARWATER

Vertigo is a consciousness of a departure from the normal relationship of the body in space. It is a subjective symptom and, like pain or headache, may occur in connection with a great many physical conditions.

Equilibrium means an even adjustment between opposing forces. If this adjustment becomes uneven, equilibrium is lost, and vertigo results. The degree of vertigo is dependent on the nature and extent of the disturbing force and somewhat on its location.

The equilibrium is maintained by the coordination of impressions from three important body systems. These are the eyes, the labyrinth of the ears and the muscle-joint or tactile system. There must be agreement in the impressions sent in by at least two of these to maintain equilibrium. If the labyrinths are not functioning, as in a deaf-mute, the other two systems carry on. If the spinal pathways are cut off, as in tabes, the person so affected loses his sense of balance if he closes his eyes, which is the Romberg sign. The blind rely upon the other two systems to tell them their position in space.

In order to understand the mechanism of vertigo one must recognize certain definite anatomic and physiologic facts. Hair cells of the saccule and utricle send out neuraxons, which unite with others from the semicircular canals to form the vestibular part of the eighth nerve. This nerve ends on the dorsal side of the pons and medulla in three nuclei: (1) the dorsal nucleus, in the floor of the fourth ventricle, (2) the nucleus of the descending root and (3) the nucleus of Deiters, part of which is in the lateral wall of the fourth ventricle. The dorsal nucleus and the nucleus of Deiters are in intimate relation with the cerebellum in the direct sensory cerebellar tract, and this link-up between the vestibular nerve and the cerebellum has a special significance in connection with equilibrium. The fibers of

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this tract arise mostly from the roof cells of the cerebellum and cross the midline to end in the nucleus of Deiters on the opposite side, and possibly also in the sensory nuclei of certain other cranial nerves.

Deiters' nucleus sends sensory fibers down the anterior motor horns of the cord as far as the lumbar region. These are in close association with the motor cells of the cord, and control the deep sensory impulses from the muscles, tendons and joints. Disturbances recorded by these fibers give the unsteady gait and incoordinated movements in vertigo.

Other fibers connect Deiters' nucleus with (1) the oculomotor and visual nuclei through which the eyes exert their influence on equilibrium, (2) the nucleus of the vagus nerve and through it with the sympathetic system, hence the pallor, sweats, nausea, vomiting and cardiac symptoms associated with severe vertigo, and (3) the cortex of the temporal lobe of the cerebrum, considered the center for motion-sense. Thus the importance of Deiters' nucleus as a connecting link between the labyrinth and many of the important centers in the brain and spinal cord is apparent.

In normal states this interlocking control mechanism, which is mostly bilateral, is so poised that all movements and changes of position of any part of the body are compensated for, and the individual person maintains his proper relationship to things about him. But if any part of this system gets out of step with the system as a whole, that relationship is upset, and conflicting impressions are transmitted which the intelligence centers cannot coordinate. Things assume a relationship which, in the light of past experience, cannot be reconciled, and the resultant confusion becomes vertigo, which most patients speak of as dizziness. Also, if the impulses arising in the vestibular nerve at its origin in the labyrinth are unduly stimulated or retarded, dizziness and nystagmus result. This fact is made use of in making functional vestibular tests. Hot water stimulates and cold water retards the normal action.

With the labyrinth linked up so widely with centers in the brain and spinal cord, it follows that it can be affected by a great variety of influences acting in many areas. The nearer to the labyrinth the disturbing influence occurs, the more definite is the sensation of turning and the more pronounced the vertigo. This peripheral type is precipitated by movement, especially of the head. It comes on in attacks, and there is a definite impulse to move or fall to one side, or there may be a feeling of being pushed to one side.

When the disturbance is central in origin, the symptoms are less definite. The patient cannot give a clearcut description of his sensations, describing them more as an indefinite feeling of confusion and of things wavering before his eyes, with unsteadiness in gait and a desire to catch hold of something to keep from falling. This dizziness tends to come on when he is at rest and it is independent of movement.

Vertigo may occur in connection with a great many systemic conditions, notably the anemias and leukemias, arteriosclerosis, cardiovascular disease, gastrointestinal disturbances and endocrine disorders including the male climacteric. Toxins from focal infections in teeth, tonsils and sinuses, or from certain drugs such as quinine, tobacco, the salicylates and the sulfonamide group, by acting either directly or indirectly on the labyrinth may cause vertigo. In fact, it is now considered by many that Meniere's syndrome is caused by focal infection.

A rather persistent and not easily relieved form of vertigo occurs in older people, due to sclerosis of the cerebral vessels. It is probably caused by lack of proper oxygenation and is usually associated with loss of memory and lack of concentration. The presence of retinal arteriosclerosis offers a clue. The posterior inferior cerebellar artery lies in close association with the medulla and the cerebellum. Thrombosis of this vessel often causes rather severe vertigo, which tends gradually to disappear. This is in contrast to the vertigo due to arteriosclerosis which tends to be persistent and is not apt to yield to any form of treatment. Cerebral hemorrhage and thrombosis are often preceded by vertigo.

In this connection one must not, as patients often do, confuse syncope, which is due to temporary cerebral anemia, with vertigo. In the former, consciousness may be lost, momentarily at least, while in vertigo there can be no loss of consciousness, since consciousness is its prerequisite. There is also a sensation of rotation in vertigo not present in syncope.

Dizziness is frequently experienced in the type of gastrointestinal disturbances which is associated with chronic constipation and putrefactive conditions of the colon. These conditions exist mostly in persons past middle life. A course of calomel and salines usually clears up the dizzi-

ness promptly, but dietary and regulative measures to ensure a healthy intestine should be instigated.

Vertigo may occur in connection with a discharging ear. If it is mild, it suggests perilabyrinthitis and indicates the need for freer drainage, usually mastoidectomy. If the attack is severe, with nausea, vomiting, ataxia, nystagmus and deafness, it indicates an extension of the infection to the labyrinth itself, or possibly to the cerebellum, and more radical surgery is required. The external auditory canals should always be inspected, as foreign bodies and impacted cerumen may cause vertigo by pressure transmitted through the drum to the labyrinth. A nonpatent eustachian tube may also be a cause. Extension of a granuloma from the middle ear to the labyrinth may produce Meniere's symptom complex. Small doses of potassium iodide taken sufficiently long will frequently effect a cure in cases of this type.

With direct involvement of the vestibular apparatus of one side, either from irritation or from some destructive process, there is always spontaneous nystagmus and vertigo, due to disharmony in the impulses from the two labyrinths. This nystagmus is the true vestibular type consisting of a slow movement in one direction with a quick recovery movement in the opposite direction. Labyrinthine vertigo is rotary, and surrounding objects move in a plane corresponding to the plane of the nystagmus, while the body tends to fall in the direction of the slow movement. This latter fact may be considered diagnostic for disturbances of vestibular origin as in practically all others the tendency to fall is not in the direction of the slow movement.

Anything causing diplopia may produce vertigo. This occurs in the early stages of paralysis of the ocular muscles or of paresis. The vertigo increases when the eyes are turned toward the affected muscle and decreases when they are turned away from it. Hypophoria, even of small degree, is a common cause of vertigo.

If glasses are not properly fitted, or are not correctly centered before the eyes, diplopia, and hence often vertigo, may result. For example, a plus lens decentered out produces a prism base out, and a minus lens decentered out produces a prism base in. The amount of resulting image displacement would vary with the strength of the lens, and vertigo would occur when the two images could not be made to coincide. Vertigo due to ocular causes disappears when one or both eyes are closed. This is a simple method of ruling out other causes. I have observed that imbalance of the ocular muscles and improperly fitted glasses are the cause of many of the cases of vertigo coming to my attention.

Aviation furnishes proof of how important the eyes are in maintaining equilibrium. No matter how perfect the mechanism of his inner ear, a flyer cannot keep his ship on an even keel unless he can see the horizon, or unless he has learned to fly blind by his instruments and to ignore his vestibular sensations. Thus the eye, by fixing on a point of known relationship, in this case the horizon, can overrule the influence of the labyrinth in the maintenance of equilibrium. Vertigo may result when the eyes are confronted with some unaccustomed environment, as when one watches a rapidly moving train pass close by, or looks down from a height.

Intracranial tumors may be a cause of vertigo by the increased pressure they produce. This pressure is transmitted through the aquaeductus vestibuli to the labyrinthine fluid. If the labyrinth on one side is more irritable than that on the other, the resultant difference in the impulses set up produces vertigo. Tumors of the brain in the temporal lobe and near the fissure of Sylvius seem to induce vertigo more readily than do tumors elsewhere. This tendency is due no doubt to their action on the associated vestibular center in the temporal lobes. Acoustic nerve tumors or sclerosed vessels pressing on the eighth nerve are causes of vertigo, generally associated with deafness on the same side.

Vertigo following injuries of the head is probably due to concussion of the nerve cells in the labyrinth and is apt to be slow in clearing up. This is important to remember in dealing with accident cases. It is more common after basilar fractures than after fractures of the convexities.

Multiple sclerosis is a degenerative condition involving the brain stem. Its commonest and perhaps only symptom is vertigo, which may be transitory or persistent.

Many factors enter into the diagnosis of vertigo which may require cooperative study by the otologist and the internist as well as the neurosurgeon. The history is important. Factors to be considered include the associated symptoms, as nausea, sweats and diplopia; the relation to other conditions, as discharging ears, injuries of the head, constipation, age of the patient and habits

of life; the nature and duration of the attacks including the mode of onset, whether in short episodes as in the peripheral or labyrinthine type, or more continuous ones as in the central type.

Examination of the eyegrounds may reveal a choked disk, which is indicative of intracranial pressure and possible tumor. Vertigo is not a significant localizing symptom in tumors of the brain, as it may occur with tumors in any part of the brain. In psychogenic cases the patient feels that he is going to fall, especially when alone, and he does not experience rotatory sensations.

The triad symptoms of sudden deafness, tinnitus and vertigo are distinctive of Meniere's syndrome, and if the present theory that it is due to focal sepsis is correct, the treatment of this condition suggests itself. Histamine desensitization is being used with considerable success. In most cases the vertigo is promptly relieved, and the tinnitus is cured or greatly lessened, especially if the drug is given intravenously. There may still be justification, however, for the view that the site of the lesion is in the eighth nerve and not in the labyrinth and that the cure is effected by section of the vestibular part of that nerve.

The treatment of vertigo is directed at the cause. In many instances thorough elimination, rest and correction of dietary errors suffice. If there are ocular abnormalities, they should be suitably corrected. Surgery may be required in cases associated with a discharging ear and in cases of tumor of the brain. Foci of infection should be cleared up. Anemias, other blood dyscrasias and endocrine disturbances require appropriate medication. In cases of injury of the head the patient requires prolonged rest, freedom from worry and possibly some sedation. Those cases considered due to retention of sodium with a resultant waterlogging of the tissues require treatment consisting of a sodium-poor diet and the administration of six 7½ grain enteric-coated capsules of ammonium chloride or potassium nitrate (45 grains), three times daily with meals. This medication prevents the sodium from being retanied in the tissues. If given for three days and omitted for two days, it may be continued indefinitely.

SUMMARY

1. Vertigo is a symptom, not a disease entity.

2. An attempt has been made to describe the anatomic pathways through which vertigo acts and some of the conditions responsible for its occurrence.

3. The majority of the cases of dizziness I have seen have been due to some form of toxic absorption, particularly from chronic constipation and putrefactive conditions of the colon and from foci of infection elsewhere, or to refractive errors and imbalance of ocular muscles, or to cerebral arteriosclerosis.

4. Diagnosis can be facilitated by careful attention to the history and to the nature of the attacks, the preexisting conditions and the associated symptoms.

5. Treatment is directed at the cause.

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DISCUSSION

DR. W. C. MCCONNELL, St. Petersburg: I wish to thank Dr. Nickle for inviting me to come here and to congratulate him on his excellent presentation. He has done a great deal of work on it, and it covers a subject met in all fields of practice.

Although the symptom of vertigo is subjective, it is described as subjective when the patient feels that he is moving in space and as objective when he has the sensation that his environment is in motion about him.

There is a peculiar recurring type of vertigo that is observed in Switzerland and northern Japan. It attacks the young and robust during the summer months and is accompanied by pain and stiffness of the neck. An attack lasts ten minutes and leaves only to recur. After several seasons the patient fails to have attacks. The cause is unknown.

Neurosis is probably the most common cause of vertigo due to vasomotor instability. Tumors of the brain, especially cerebellar tumors, may cause vertigo. Frontal tumors, however, may irritate cerebellar tumors by pressure on the frontopontocerebellar tracts.

The ataxia associated with disease of posterior column of the spinal cord, such as occurs in tabes, may be differentiated from that of cerebellar disease because in the former it appears with the eyes closed and in the latter, use of vision does not change it.

The cerebellum serves as a governing organ for control of the higher centers. After symptoms of acute cerebellar lesions subside, the cerebrum assumes the function that has been lost by the cerebellum, and the ataxia abates.

Buy War Bonds

ENCEPHALITIS COMPLICATING MEASLES

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It appears probable that there has been an increase of encephalitis complicating measles in recent years. Although the degree of severity is widely variable and the signs are of a myriad quality, it is unlikely that cases escaped unnoticed before the last two decades, since which time there has been a decided increase in the number of reported cases. Laboratory data help but little in diagnosing the condition, and no new procedures have been developed that aid in diagnosis. Of the 11 cases seen at St. Luke's Hospital in the last sixteen years, which form the basis of this report, 7 occurred between January and May of 1942.

The cause of this complication is unknown. The theories advanced include (1) the invasion of the central nervous system by the virus of measles, (2) the invasion of the central nervous system by a neurotropic strain of this virus, (3) an allergic reaction within the central nervous system to this virus and (4) infection with a virus separate and distinct from the virus of measles. Unless the condition can be produced experimentally, its etiology will probably remain in question.

The English, German, Spanish, French and Portuguese literature was recently reviewed by Hamilton and Hanna,[1] who added 44 cases of their own. By reporting additional cases it is hoped that at some time a common characteristic may be discovered which will aid in diagnosis and that a rational treatment may be developed.

REPORT OF CASES

Case 1.—C. M., a white girl aged 4, was admitted to the hospital on April 2, 1934. Measles had developed on March 16, and she was allowed out of bed on March 25 after a "light" attack with little fever. That evening a sudden elevation of temperature and vomiting occurred. On March 26 she became unconscious and that night had convulsions. From March 27 until the time of admission she had frequent periods of unconsciousness lasting from five to ten minutes, or longer. The day before admission opisthotonus and a deviation of the eyes to the left developed.

She was admitted in an unconscious state. The temperature was 101 F. rectally, the pulse rate was 120, and respirations were 25 per minute. The eyes were deviated upward and to the left, and the pupils were slightly contracted. There was resistance to flexion of the neck. The day following admission the temperature was 101 F. rectally and gradually returned to normal. She remained comatose for two days and was fed intravenously. For the first six days there was weakness of the left hand. On the fourth day after admission stiffness of the right leg was noted, and there was an absence of abdominal reflexes. On the seventh day all reflexes were normal, but six days later absence of the left knee jerk was noted. She was discharged on April 16 without abnormal neurologic signs.

While on the ward she was never heard to talk, and it was not determined whether mental changes had taken place during her illness. A follow-up eight years later disclosed that the child is very "nervous and irritable," in pronounced contrast to her three siblings. She has never been promoted in school after six years of attendance. She has no motor disturbance or known physical defect.

Case 2.—W. McL., a white boy aged 12, was admitted on May 14, 1934. Measles had developed seven days before admission, and he was apparently recovering normally until the evening of admission when he had a convulsion. He was admitted in a state of coma with temperature of 102.8 F. rectally, a pulse rate of 140 and respirations 32 per minute. The Kernig reflex was positive, and Babinski signs were present bilaterally. There was an absence of superficial reflexes. Two days later, on May 16, the child could be aroused, but his mentation seemed dulled. The abdominal reflexes were absent, and there was ptosis of the right upper eyelid. On May 17 he seemed entirely recovered and on May 19 was discharged without abnormal signs.

Case 3.—W. P., a white boy aged 10 months, was admitted on March 6, 1938. He had had measles beginning fifteen days before admission and seemed to have recovered within one week. On March 4 an extremely severe headache and some fever were noticed. On admission, the temperature was 104 F. rectally, the pulse rate was 105, and respirations were 30 per minute. The temperature soon rose to 104.8 F. Examination by a neurologist a short time after admission revealed generalized hyperactive reflexes and slight stiffness of the neck. There was bilateral nystagmus. The veins of the fundi were engorged. The cranial nerves were normal, and there were no palsies. Two days later the child seemed entirely recovered and he was discharged on March 13.

Case 4.—L. Y., a white boy aged 2, had a rash typical of measles two days before admission. A sibling had recently recovered from the disease. The onset was rather severe with high fever and great irritability. On the morning of admission the child had a convulsion. He was admitted unconscious in a tonic state, with occasional clonic twitchings. The temperature was 103.6 F. at this time. Following a spinal tap and administration of a barbiturate by rectum, he seemed improved, but clonic convulsions continued intermittently throughout the day until death occurred that evening. Cyanosis was severe despite continuous inhalation of oxygen. The temperature gradually rose to 107 F. at the time of death. Careful physical examination revealed no concurrent infection. While no roentgenograms were made, there were no signs of pneumonia. The ear drums appeared normal. A postmorten examination revealed "pulmonary congestion, acute dilatation of the cardiac auricles, and cloudy swelling of the liver and kidneys with passive congestion of these organs." Permission was not granted for examination of the brain or spinal cord. It was assumed that the principal pathologic change was in the central nervous system.

Case 5.—K. T., a white girl aged 11 months, was admitted on Feb. 7, 1942, with a history of having had measles two weeks previously. She had apparently recovered without complications, but five days before admission, on February 2, there developed a "cold without fever." On the day of admission she had five separate convulsive seizures involving the right side of the body before entering the hospital. On admission, the temperature was 102 F. rectally and it did not rise above this level. She was conscious, but there were some twitchings of the muscles of the right lower extremity. She would not move her right arm or leg. The patellar

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reflex on the right was decreased, and there was a positive Babinski reflex on that side. The following day the child seemed improved, but twitchings of the eyelids and face on the right side were noted. Use of the right arm and leg returned gradually and seemed normal on February 28, the date of discharge.

Case 6.—A. C., a white girl aged 6, had measles seven days before admission on Feb. 27, 1942. She seemed to be recovering uneventfully until the day of admission when she had a generalized clonic convulsion. On admission, the temperature was 103.4 F. rectally. She was in a convulsive state and continued to have seizures for twenty-four hours. For the following three days she was only semiconscious, and it was necessary to administer fluids intravenously and subcutaneously. The temperature remained normal after three days. Neurologic signs varied from day to day. One week after admission the left arm and both legs were in a spastic state, and she was apparently unable to talk. A few days later it was noted that her mouth was pulled to the right. She was discharged on March 12 and has subsequently been admitted to Hope Haven Hospital. Three months after the onset she has the appearance of a child in a spastic state. She is mentally alert, but is unable to walk without support, and coordination of the lower extremities is poor. Her speech is slurred and slow.

Case 7.—D. B., a white boy aged 8, was admitted on March 5, 1942, six days after the rash of measles had developed. He seemed well that morning until he suddenly had a violent generalized clonic convulsion. On admission to the hospital the temperature was 101.6 F. rectally, the pulse rate was 130, and respirations were 40 per minute. Cyanosis was severe. Because of the convulsive movements two attendants were required to hold him on the bed. After the administration of oxygen, chloroform, a barbiturate intravenously, chloral hydrate and sodium bromide by rectum, and magnesium sulfate intramuscularly, the convulsion ceased. About four hours later he had another generalized clonic convulsion that lasted about fifteen minutes. The following day he was irrational, and there was an absence of all tendon, abdominal and cremasteric reflexes. On the second day following the attack he was rational, and the reflexes were present but weak. During the next three days he apparently recovered completely, and he was discharged on March 10. Several examinations up to two months following the attack revealed no residual signs.

Case 8.—S. K., a white girl aged 15 months, was admitted on March 20, 1942. The classical rash of measles had developed three days previously. The day of admission she had generalized muscular seizures described as "twitchings." At home the temperature was 100 F. rectally. On admission, it was 99.4 F. rectally, the pulse rate was 132, and respirations were 28 per minute. She was drowsy, but could be aroused. She had an apprehensive appearance. She vomited once. The temperature remained normal, and in two days she seemed fully recovered.

Case 9.—G. M., a white girl aged 3 years, was admitted on March 28, 1942. Six days before, the rash of measles had developed. She was recovering normally until the day of admission when she suddenly vomited and shortly thereafter became unconscious. On admission, the temperature was 101 F. rectally, the pulse rate was 125, and respirations were 32 per minute. The face, arm and leg on the right side were twitching, and the left leg was in a spastic state. She was unconscious, and saliva was drooling from her mouth. The next day she was still irrational, and it was noted that the pupils were dilated. Two days after admission she was talking normally. She was discharged on April 1. For the following two days she complained of pain in the left foot and refused to walk. After that time no residual signs were noted.

Case 10.—W. B., a white boy aged 7, was admitted on April 8, 1942. A rash typical of measles had developed four days before, but had faded by the time he entered the hospital. On the day of admission it was noted that he was unusually irritable and drowsy. He complained of severe headache, and incoordination and trembling of the hands were noted. On admission, the temperature was 103 F. rectally, and it descended to normal in thirty-six hours. He was drowsy and very irritable when aroused. The positive physical signs were confined to the nervous system. There was a positive Brudjinski sign. The abdominal and patellar reflexes were absent. A Babinski sign was present bilaterally, and an ankle clonus on the left side was noted. The following day he remained stuporous. Two days after the onset he was more alert, and the neurologic signs had disappeared except for the absence of knee jerks. He was discharged on April 12 completely recovered.

Case 11.—M. H., a white girl aged 8, was admitted on April 11, 1942. The rash of measles had appeared four days before. She seemed to have a light case, but on the day of admission she had a generalized clonic convulsion. She was unconscious when she was admitted to the hospital. The temperature was 103.8 F. rectally, the pulse rate was 130, and respirations were 45 per minute. Stiffness of the neck was present. Reflexes of the upper extremities were normal, but the abdominal reflexes and the knee and ankle jerks were absent. There was a positive Kernig sign. It was necessary to feed the child by vein until consciousness was regained the following day. She did not seem to comprehend speech until the fourth day after admission, and it was feared that she was deaf until that time. She was discharged on April 18, without residual signs.

DISCUSSION

Incidence—According to Hoyne,[2] who analyzed the measles epidemic of 1938 in Chicago, about 1 case of encephalitis per thousand cases of measles may be expected. Because of inaccurate reporting of cases, a definite incidence is difficult to determine. Hamilton and Hanna[1] concluded that the number of cases of encephalitis will be proportional to the number of cases of measles in the community. In this smaller series, this conclusion was not confirmed. As shown in table 1, the number of cases of measles reported in Jacksonville from 1932 until May 1942 compared with the number of cases of encephalitis associated with measles seen during that time at St. Luke's Hospital, where the only isolation department in the city is located, indicates a disproportion probably more than coincidental. In the epidemic of 1941, when 8,211 cases were reported, there was only 1 case of encephalitis. In the first four months of 1942, when 979 cases were reported, 7 cases of encephalitis were treated there.

Age and Sex—In the cases reported the age of the patient ranged from 10 months to 12 years, with an average of 4.8 years. The age incidence shows a close parallelism to the age incidence of measles in general. Five of the cases occurred in

boys and 6 in girls. No sex predilection has been noted in larger series.

Onset—Like the signs and symptoms of the disease, the onset is variable. While it is known that encephalitis may occur before the rash during the period of invasion, it nearly always follows the disease, as in all of the cases presented. The shortest period after the appearance of the rash in this series was two days and the longest thirteen days, with an average of six and three tenths days. Frequently this complication develops after the acute phase of the attack of measles has subsided. A convulsion, usually sudden, is a frequent initial phenomenon.

Signs and Symptoms—The brief case histories given indicate that neurologic signs may be expected and that they will be variable from case to case and from day to day. No common characteristic is discernible. In 9 of the 11 cases the patient had convulsions, and because such seizures without primary neurologic disease may produce bizarre neurologic changes, some of these changes may be due to convulsions alone. High fever did not always accompany the convulsions, as in case 5, in which the patient's temperature did not rise above 102 F. despite five distinct seizures, and in case 8, in which the patient had no fever. At some time during the course of the disease, in 7 of the cases paralysis of one or more groups of muscles occurred. The condition was usually transient and would frequently shift from day to day. Disturbances of the upper motor neurons resulting in hyperactive tendon reflexes and positive Babinski reflexes were also usually noted at one or more examinations. Pathologic changes in the eye grounds were observed in 1 case. Sensory perception, always difficult to determine in young children, was probably affected in some of the cases by drugs used to control convulsions. Clinical data are summarized in table 2.

Laboratory Findings—As indicated in table 3, the white blood count is frequently, but not consistently, elevated. In all of the cases of this series in which counts were taken, there was a leukocytosis except in case 8. Perhaps there was a stimulation to white blood cell formation in this case as well, since it would be expected that on

TABLE 1

MEASLES REPORTED IN JACKSONVILLE FROM 1932 TO MAY 1, 1942
ENCEPHALITIS COMPLICATING MEASLES SEEN AT ST. LUKE'S HOSPITAL FROM 1926 TO MAY 1, 1942

Year	1926-32	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942 Jan.-Apr.
Reported cases of measles		35	686	2893	108	29	42	3473	61	64	8211	979
Cases of encephalitis	0	0	0	2	0	0	0	1	0	0	1	7

TABLE 2
SUMMARY OF CLINICAL DATA

Name	Case Number	Date of Admission	Sex	Age	Onset After Rash in Days	Convulsions	Maximum Temperature	Death	Residual Signs
C. M.	1	4/2/34	F	4 yrs.	11	yes	105	no	Emotional instability; mental retardation
W. McL.	2	5/14/34	M	12 yrs.	7	yes	105	no	none
W. P.	3	3/6/38	M	10 yrs.	13	no	104.8	no	none
L. Y.	4	5/19/41	M	2 yrs.	2	yes	107 at death	yes	——
K. T.	5	2/7/42	F	11 mos.	14	yes 5 before admission	102	no	none
A. C.	6	3/27/42	F	6 yrs.	7	yes	102	no	Spasticity; muscular incoordination
D. B.	7	3/5/42	M	8 yrs.	6	yes	103	no	none
S. K.	8	3/20/42	F	15 mos.	3	yes	none	no	none
G. M.	9	3/28/42	F	3 yrs.	6	yes	102	no	none
W. B.	10	4/8/42	M	7 yrs.	4	no	103	no	none
M. H.	11	4/11/42	F	8 yrs.	4	yes	104	no	none

TABLE 3
SUMMARY OF LABORATORY FINDINGS

Case No.	Spinal Fluid					Blood Count	
	Pressure	Cells	Protein	Kahn	Culture	White Count	Differential
1	no increase	2 L	Pandy negative		negative	16,650	Band 7 Seg. 71 L 20 M 2
2	slight increase	9 L		negative		11,000	P 73 L 26 E 1
3	3/6 increase 3/7 no increase	3/6 1 L 3/7 1 L 1 P	negative	negative		23,650	Juv. 1 Band 34 Seg. 47 L 13 M 5
4	no increase	2 P 6 L	0.3 Gm. liter	negative		11,350	Seg. 76 L 24
5	2/7 200 mm. 2/9 100 mm.	2/7 2 L 2/9 2 L 1 P	0.27 Gm. liter Globulin negative			11,300	Band 5 Seg. 59 L 36
6		8 P 22 L	Globulin 2 plus		negative	34,600	Juv. 2 Band 38 Seg. 30 L 10
7	3/5 100 mm.	27 L 3 P	Globulin 2 plus		negative	29,150	Juv. 1 Band 19 Seg. 73 L 6
8		0	Globulin 1 plus			8,500	Myelc. 2 Juv. 8 Band 30 Seg. 20 L 33
9	no increase	14 L		Wassermann negative			
10		28 P 58 L	Pandy 2 plus	negative			
11	no increase	26 L 18 P	Pandy 2 plus	negative		17,800	Band 11 Seg. 66 L 23

the third day after the appearance of the rash of measles a leukopenia would be present. Examination of the spinal fluid gives inconsistent results. While it may be expected that in a majority of cases the spinal fluid will show (1) an increase of pressure, (2) an increase of cells, particularly lymphocytes, and (3) an increase of protein, one or all of these findings may be absent.

Pathology—Pathologic studies by Malamud[3] and others revealed that there is a predilection of the lesions for the white matter of the central nervous system. There occur an exudation of hematogenous elements and a proliferation of microglia, that later are replaced by gitter cells that may be engorged with fat. The case reported by Ziskind and Schattenberg[4] is interesting particularly because the patient lived eight months, and therefore late changes were observed. The blood vessels of the central nervous system were congested, and there was a perivascular microglia proliferation with some lymphocytic infiltration. Some demyelinization with occasional phagocytic cells containing fat was noted.

Prognosis—Hamilton and Hanna,[1] who have recorded the greatest number of cases, stated that in approximately 40 per cent of cases recovery is complete, in 40 per cent there are residual signs, and in 20 per cent death ensues. Ford,[6] reviewing 125 cases, noted that the mortality was 10 per cent and that residual signs were present in 65 per cent of the cases. In two series Peterman and Fox[6] reported a total of 27 cases with a mortality of 29.6 per cent. In the smaller series presented here the mortality was 9 per cent with residual signs in 17.2 per cent.

Treatment—There is no specific treatment for encephalitis complicating measles. The use of convalescent serum or immune globulin is not indicated since, as Rivers[7] pointed out, when a virus invades the central nervous system, an irreversible reaction is set up. By the time signs

of encephalitis complicating measles appear, it is too late for immune bodies to be beneficial. Hamilton and Hanna[1] employed intravenous typhoid shock therapy in a small number of cases, and while no conclusions can be drawn, this procedure may prove to be of value.

In all except two of the cases of this series the patient had convulsions. The frequency of convulsive seizures has been noted in other series.[6] In the fatal case of this series the convulsive state was not relieved. Convulsions from any cause should be relieved as soon as possible because of the possible irreparable damage that they may do to the central nervous system. Particularly in this condition, when repeated convulsions occur frequently, the physician must not only stop the present convulsion, but do all in his power to prevent a subsequent one. The following routine has been time-proved:

1. Use of a general anesthetic as an emergency measure. Ether, chloroform or vinyl ether may be used. I prefer the latter two agents because their action is quicker and their depressant action greater, but it is to be remembered that the margin of safety is not as great as with ether.

2. Oxygen inhalation if there is cyanosis.

3. If the convulsions are not promptly relieved by the general anesthetic, sodium amytal, 1/25 grain per pound of body weight with a maximum dose of 3 grains, may be administered intravenously.

4. A spinal tap, done for diagnosis and to reduce intracranial pressure, is not attempted until the convulsive movements have abated.

5. Administration of a cleansing enema.

6. Sedatives given rectally. Sodium bromide, ¾ grain per pound of body weight, and chloral hydrate, 1/10 grain per pound of body weight, administered together are effective and safe. In recent years pentobarbiturates have become popular. They may be given in solution or as a suppository. Between 1/25 and 1/50 grain per pound of body weight may be used, depending on the amount of sedation desired. If sodium amytal were previously given intravenously, chloral hydrate and bromides would be preferred to pentobarbiturates.

7. From 0.1 to 0.15 cc. per pound of body weight of a 25 per cent solution of magnesium sulfate given intramuscularly.

8. When consciousness is regained, a relatively large dose of saline cathartic, and bromides given for several days by mouth, unless the condition appears to be relieved, or unless the routine outlined has caused great depression.

SUMMARY

1. Eleven cases of encephalitis complicating measles are presented.

2. Variability of signs and symptoms, a consistent characteristic of the disease, is illustrated by these cases.

3. A leukocytosis was present in all except one of the cases in which blood counts were made.

4. The results of examination of the spinal fluid were inconsistent.

5. Therapy is discussed, and the treatment of convulsions, which occurred in all but two of the cases, is outlined.

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A DOCTOR'S PLEA IN WARTIME

The doctor's life, in times like these,
Is not exactly one of ease.

For, on the home front, each M. D.
Is busier than any bee!

He's shouldering the burden for
The other docs, who've gone to war.

This leaves your doctor precious little
Time to sit around and whittle.

And indicates the reason why
You ought to help the poor old guy.

How?

1. *By keeping yourselves in the best of condition*
Thus avoiding the ills that demand a physician.

2. *By phoning him promptly when illness gives warning,*
But—unless very serious—waiting till morning.

3. *By cheerfully taking whatever appointment*
He makes for prescribing his pills or his ointment.

4. *By calling on him where he works or resides*
Instead of insisting he rush to your sides.
(Of course, he'll come 'round when there's need for his service
But spare him the trip when you're nothing but nervous.)

5. *And, last but not least, you can help in this crisis*
By carefully following Doctor's advices.

If these commandments you'll adhere to
A doctor's heart you will be dear to!

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*Alternate to act for member who is in Armed Services and listed just above.

The Journal of The Florida Medical Association

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PROCUREMENT AND ASSIGNMENT HEADS MEET IN ATLANTA

On December 17 and 18, 1942, there was held in Atlanta a conference of state and corps area officials of the Procurement and Assignment Service, officers of allied organizations and representatives of the United States Public Health Service.

The meeting was conducted by Dr. Maxwell E. Lapham, Executive Officer of the Procurement and Assignment Service in Washington. Dr. James E. Paullin of Atlanta, president-elect of the American Medical Association and member of the National Board of the Procurement and Assignment Service, opened the meeting by giving a summary of what had been accomplished through 1942. The Southeastern States, which were the ones represented at this meeting, had all met the quota of doctors which had been set for them.

The United States Public Health Service was represented by Dr. Carl E. Rice, Senior Surgeon, Dr. C. L. Williams, Senior Surgeon District No. 4, United States Public Health Service, and others.

The chief object of the meeting was a presentation of the problems for next year and a discussion of a program through which they could be solved. The main problem in Florida, it appears, will be providing physicians for "critical areas." By that is meant a local shortage of physicians due either to the loss of doctors to the military services, or to an increase in population too great for the physicians who are already practicing in the community. There are several such areas in our state. Your Procurement and Assignment Committee, in conjunction with the chairman of the Medical Division of the State Defense Council, and with the cooperation of the State Board of Medical Examiners, is endeavoring with encouraging success to locate doctors in these areas.

It was evident to everyone present that if the medical needs of the various communities are to be met, it will be necessary to have on file information much more complete and more accurate than that which is now available. Anticipating such a need the state chairman on Procurement and Assignment in Florida had a meeting about three weeks prior to the one in Atlanta and adopted a method for obtaining this information, which interestingly enough is almost exactly like the one which was presented at the conference in Atlanta. Each doctor now in the state will have a special index card upon which is noted information obtained locally concerning him. The Procurement and Assignment Committees will classify again every doctor in the state. In deciding upon a classification the need for civilian medical attention will be considered, along with the possibility of increased need for doctors in the military services. The files thus compiled will be a ready help to everyone charged with the responsibility of obtaining doctors for the military services and preserving the high standard of civilian medical care.

The State Committee is desirous of obtaining the name of every doctor who is willing to be moved from one portion of the state to another to meet some urgent local need. Dr. Frank H. Lahey, Chairman of the Directing Board of the Procurement and Assignment Service of Washington, recently issued the following statement:

> It is of the utmost importance that the Procurement and Assignment Service for Physicians, Dentists, and Veterinarians, immediately have the name of any doctor who really is willing to be dislocated for service, either in industry or in over-populated areas, and who has not been declared essential to his present locality. This is necessary if the medical profession is to be able to meet these needs adequately and promptly. We urgently request that any physician over the age of 45 who wishes to participate in the war effort send in his name to the State Chairman for the Procurement and Assignment Service in his state.

MEDICAL POSTGRADUATE COURSE

The Tenth Annual Graduate Short Course for doctors of medicine, held June 22-27, 1942, in Jacksonville had the largest registration so far recorded. The total registration was 195, of which 148 paid the registration fee. In the May issue of the Florida Medical Journal a complete program and the names of the faculty members were published. The Association's Committee on

Medical Postgraduate Course has made an enviable record under the leadership of Dr. T. Z. Cason who has served as the head of this committee for the past ten years. The outstanding physicians who served as faculty members have brought to the Florida doctors a course that has been of exceptional value to the practitioners who participated.

The finances of this committee have at all times been in excellent condition. Receipts through the $5.00 registration fee have a little more than covered all of the committee's expenses during the ten-year period. The financial statement submitted by Dr. George C. Tillman, treasurer, as of October 1, 1942, follows:

Cash on hand October 1, 1941		$ 614.99
Florida Medical Association, January 22, 1942, by check		500.00
Paid Registration Postgraduate Course, 1942, 148 at $5.00		740.00
Total		$1,854.99
Check No. 92, Miss Jean Kennedy, salary	$100.00	
Check No. 93, Miss Jean Kennedy, stamps	10.00	
Check No. 94, Dr. R. B. Cattell	117.85	
Check No. 95, Dr. Alton Ochsner	130.00	
Check No. 96, George Washington Hotel	72.71	
Check No. 97, Miss Hazel Donegan, stamps	10.00	
Check No. 98, Dr. Robert W. Wilkins	193.37	
Check No. 99, Pepper Printing Company	6.00	
Check No. 100, Dr. Harold E. Harrison	15.00	
By cash Miss Hazel Donegan, Secretary	25.00	
Total	$679.93	
Balance on hand October 1, 1942		$1,175.06

(Signed) George C. Tillman.

According to Dr. Cason's statement, there is one obligation amounting to $100.00, still outstanding, and a check for $35.00 was received since the financial statement was prepared.

SOUTHERN MEDICAL MEETING

The annual meeting of the Southern Medical Association, held in Richmond, November 10 to 12, 1942, was of unusual interest. Nearly 1,400 physicians were in attendance, a registration which under present conditions, surpassed all expectations. At the previous meeting the registration was approximately 3,000. Members of the Florida Medical Association who attended were:

Chiefland: William C. Young. *Gainesville*: John E. Maines, Jr., DeWitt T. Smith. *Jacksonville*: Alan Brown, Henry Hanson, O. E. Harrell, Luther W. Holloway, R. R. Killinger, T. H. Lipscomb, J. G. Lyerly, Robert B. McIver, James N. Patterson, Harry A. Peyton, C. D. Rollins, C. M. Sandusky. *Kissimmee*: Avaline N. Lancaster. *Miami*: Walter C. Jones, John D. Milton, J. Randolph Perdue, Jean Jones Perdue, John W. Snyder. *Miami Beach*: William Linder, Harrison A. Walker. *Ocala*: Eugene G. Peek. *Orlando*: E. L. Jewett. *Tampa*: C. A. Andrews, H. M. Cook, H. Mason Smith. *West Palm Beach*: Lloyd J. Netto. *Winter Park*: Ruth S. Hart, Rosalie S. Morton.

MEMBERS IN ARMED SERVICES

Names and addresses of doctors in the Armed Services, received since the list was published in the November and December Journals:

ALACHUA

Collins, Grover C. ..... Gainesville

DADE

Agos, I. H. ..... Miami Beach
Harris, Robert M. ..... Miami

DUVAL

Hanson, Karl ..... Jacksonville
King, F. Gordon ..... "
Lipscomb, T. H. ..... "
Patterson, James N. ..... "

MANATEE

Floyd, Alva J. ..... Palmetto

PINELLAS

Meyer, Francis P. ..... St. Petersburg
Murphey, Dan'l F. H. ..... "

POLK

Bond, Benjamin J. ..... Winter Haven

SARASOTA

Powers, Earl J. ..... Blanchester, O.

VOLUSIA

Vallotton, J. Ralph ..... Daytona Beach

RETURNED TO PRIVATE PRACTICE

Haisfield, H. B. ..... Pensacola
Howdon, Wm. M. ..... Miami
Jefferson. Curtis B. ..... Tampa
Kaplan, Saul H. ..... Miami Beach

DONATIONS FOR PURCHASE OF WAR BONDS

Under the plan sponsored by the Board of Past Presidents, the following donations have been received for the purchase of war bonds to offset dues of members in the Armed Services:

ALACHUA COUNTY $25.00
Thomas, W. C., Gainesville

BAY COUNTY 5.00
Adams, Powell, Panama City

BREVARD COUNTY 5.00
Kenaston, T. C., Cocoa

BROWARD COUNTY 360.00
Blessing, Robert, Ft. Lauderdale
Robinson, Leigh F., Ft. Lauderdale
(From Society Treasury $250.00)

COLUMBIA COUNTY 18.75
Harkness, R. B., Lake City

DADE COUNTY 106.88
Jones, Walter C., Miami
Norman, Estella G., Battle Creek, Mich.
Stoddard, Guy R., Miami Beach
Walker, Harrison A., Miami Beach
Welch, P. B., Miami

DESOTO-HARDEE-HIGHLANDS-CHARLOTTE-GLADES COUNTY 18.75
Simmons, J. A., Arcadia

DUVAL COUNTY 1,003.75
Adams, Mark E., Jacksonville
Baker, Lynne E., Jacksonville
Brown. Alan, Jacksonville
Chilli, Joseph L., Jacksonville
Field, Thomas S., Jacksonville
Harrell, O. E., Jacksonville
Holden, Gerry R., Jacksonville

Jelks, Edward, Jacksonville
Limbaugh, Louie, Jacksonville
Lyerly, J. G., Jacksonville
McGinnis, Robert H., Jacksonville
McIver, Robert B., Jacksonville
Peyton, Harry A., Jacksonville
Provinsky, Leo B., Jacksonville
Richardson, George W., Jacksonville
Richardson, Shaler, Jacksonville
Ross, William E., Jacksonville
Royce, C. E., Jacksonville
Shaw, W. McL., Jacksonville
Taylor, H. Marshall, Jacksonville
Van Schaick, H. D., Jacksonville
Waas, F. J., Jacksonville
Wachtel, Leo M., Jr., Jacksonville
Wilson, J. Frank, Jacksonville
Woolsey, Bertram F., Jacksonville

ESCAMBIA COUNTY 36.50

Pierpont, J. H., Pensacola

HILLSBOROUGH COUNTY 662.25

Adamson, W. P., Tampa
Boling, John R., Tampa
Cook, George L., Tampa
Dickinson, J. C., Tampa
Duke, R. R. Tampa
Duncan, W. P., Tampa
Gilbert, Elsie, Tampa
Gilmer, E. S., Tampa
Griffin, J. C., Tampa
Jensen, H. J., Tampa
Lott, H. B., Tampa
Lowry, B. W., Tampa
Maguire, T. C., Plant City
Maner, George R., Tampa
Moore, J. T., Tampa
Rowlett, W. M., Tampa
Smith, H. Mason, Tampa
Woodburne, A. W., Tampa

LEE COUNTY 37.50

Bartleson, Fred D., Ft. Myers
Bostelman, Ernest, Ft. Myers

LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON COUNTY 144.00

Brinson, J. B., Monticello
Davis, Julius C., Quincy
Palmer, Henry E., Tallahassee
Pound, J. H., Tallahassee
Rhodes, B. M., Tallahassee
Ruediger, E. Henry, Chattahoochee
White, Sarah Parker, Tallahassee

ORANGE COUNTY 10.00

Kirk, A. C., Orlando

PALM BEACH COUNTY 58.75

Ditman, Norman E., Palm Beach
George, W. W., West Palm Beach
Johnson, V. M., West Palm Beach
Stephens, Edgar W., West Palm Beach

PASCO-HERNANDO-CITRUS COUNTY 18.75

Jones, W. Wardlaw, Dade City

PINELLAS COUNTY 10.00

Palmer, H. G., St. Petersburg

POLK COUNTY 187.50

Boulware, J. R., Lakeland
Dunham, Kenneth, Frostproof
Gilchrist, J. G., Bartow
Griffin, J. D., Lakeland
Horton, Waldo, Winter Haven
Meriwether, W. G., Mulberry
Pearce, C. C., Mulberry
Tillis, W. L., Lakeland
Watson, Edgar, Lakeland
Watson, Herman, Lakeland

ST. JOHNS COUNTY 47.50

Lockwood, Vernon A., St. Augustine
White, Herbert E., St. Augustine

VOLUSIA COUNTY 5.00

BIRTHS, MARRIAGES AND DEATHS

BIRTHS

Dr. and Mrs. Saul D. Rotter of Lake Worth announce the birth of a daughter, Patricia Ann, on November 17.

Dr. and Mrs. F. H. Bowen of Jacksonville announce the birth of a daughter, Henrietta Baldwin, on November 3.

Dr. and Mrs. Karl B. Hanson of Jacksonville announce the birth of a daughter, Jane Boyles, on January 9.

MARRIAGES

Dr. William R. Wandeck of Marianna and Miss Virginia Kirkland of Metter, Ga., were married on November 4.

Dr. James L. Estes and Miss Mays Sanford of Tampa were married on December 19.

DEATHS

Dr. William J. Williams of Cassia died on December 22, 1942.

Dr. William P. Adamson of Tampa, Life Member and former president of the Florida Medical Association, died on January 3, 1943.

STATE NEWS ITEMS

Dr. C. A. Rudisill, formerly of Tampa, now a lieutenant commander in the Navy, received the Naval Reserve medal for efficient and faithful service at the Naval Hospital in Jacksonville recently.

Dr. P. T. McClellan was recently appointed health officer for the city of Vero Beach.

Dr. W. W. Rogers was appointed health officer of the city of Jacksonville, in December, to succeed Dr. N. A. Upchurch who retired. Dr. Rogers has been connected with the Health Department of Jacksonville for the past fourteen years, and received unanimous approval for appointment by members of the city commission.

Dr. H. V. Weems of Sebring was principal speaker at a recent meeting of the local Rotary Club. Dr. Weems' subject was "Rotary International and Rotary Doctrine."

Florida physicians have been organized into five base hospital units for wartime protection of the civilian population. Dr. Gilbert S. Osincup of Orlando, chairman of the Health and Housing Division of the State Defense Council, stated that each unit will be composed of 15 physicians who will be based at Pensacola, Jacksonville, Orlando, Miami and Tampa. Members will be given com-

missions, inactive status, in the U. S. Public Health Service Reserve, and will be called to active duty in case of grave emergency. The five Florida units are a part of a total of 24 in six southeastern states.

DAVID ROSE

Dr. David Rose, one of the pioneers in medicine in southeastern Florida, died at a Vero Beach Hospital on December 5. He was born in Port Dover, Ontario, Canada, in 1854.

Dr. Rose practiced in Waterford, Ont., Chicago and Oklahoma City before coming to Florida in 1908. For many years he was the only physician between Titusville and Fort Pierce, and he served the area faithfully, although in the beginning he had to visit his patients on horseback or on foot. For many years he served as local registrar for vital statistics in his district.

Longevity was a characteristic of his family, and five members of his mother's family lived an average of 85 years.

Dr. Rose is survived by his widow, Mrs. Elizabeth Wegener Rose, and a daughter, Mrs. Edith Suddeard, both of Sebastian.

COMPONENT COUNTY SOCIETIES

ALACHUA

The members of the Alachua County Medical Society and of its Auxiliary were guests of Dr. and Mrs. Thomas A. Snow at a buffet supper on December 9.

BROWARD

The following officers were elected by the Broward County Medical Society at its annual meeting held at the Broward General Hospital, Ft. Lauderdale on December 9: president, Dr. D. W. Harris, Ft. Lauderdale; vice president, Dr. Robert Blessing, Ft. Lauderdale; secretary-treasurer, Dr. O. C. Brown, Ft. Lauderdale. Delegates chosen were Drs. R. L. Elliston and Elbert McLaury.

It was voted to change the meeting date of the society to the second Wednesday of each month, and to meet jointly with the Staff of the Broward General Hospital for the duration of the war.

DADE

Dr. P. S. Pelouze, for many years Professor of Urology at the University of Pennsylvania, was guest speaker at a meeting of the Dade County Medical Society held at 8 p.m., December 10 at the Jackson Memorial Hospital.

DESOTO-HARDEE-HIGHLANDS-CHARLOTTE-GLADES

The DeSoto - Hardee - Highlands - Charlotte--Glades County Medical Society held its last meeting of 1942 at the Simmons Hotel, Wauchula, December 8. No scientific program was given, but the annual election of officers was held, which resulted as follows: president, Dr. M. C. Kayton, Wauchula; and secretary-treasurer, Dr. C. H. Kirkpatrick, Arcadia. It was decided to hold quarterly instead of monthly meetings for the duration, starting with January, 1943.

DUVAL

Dr. T. Z. Cason was installed as president of the Duval County Medical Society at a meeting held on the evening of December 1, and the following officers were elected: president-elect, Dr. J. G. Lyerly; vice president, Dr. W. H. Brooks; secretary, Dr. F. A. Copp, and treasurer, Dr. John A. Beals.

ESCAMBIA

At the annual election of officers held by the Escambia County Medical Society in December, the following were chosen to head the society for 1943: president, Dr. Alvyn W. White, Pensacola; vice president, Dr. John K. Turberville, Century; and secretary-treasurer, Dr. Lee Sharp, Pensacola.

Dr. P. S. Pelouze of Philadelphia was guest speaker at the November meeting of the society. His subject was "The Control of Gonorrhea."

HILLSBOROUGH

Dr. T. C. Maguire of Plant City was elected president of the Hillsborough County Medical Society at its annual meeting held in December. Other officers elected were: vice president, Dr. R. R. Duke, Tampa; and secretary-treasurer, Dr. James S. Grable, Tampa. Delegates to the 1943 State Association meeting will be Drs. H. Mason Smith, E. F. Shaver, B. W. Lowry, S. B. Forbes and W. M. Rowlett.

LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON

A joint meeting of the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society and the Leon Society was held on November 27; Dr. P. S. Pelouze of Philadelphia was guest speaker. Dr. Pelouze, associate professor of Urology at the University of Pennsylvania, is a recognized authority on gonorrheal control and spoke on that subject.

MANATEE

At the December meeting of the Manatee County Medical Society, the following officers were elected: president, Dr. M. M. Harrison, Bradenton; vice president, Dr. J. F. Mason, Bradenton; and secretary-treasurer, Dr. L. W. Blake, Bradenton.

NASSAU

The Nassau County Medical Society met on the evening of November 30 at the Nassau County Health Department, with the following members present: Dr. George A. Dame, president; Dr. D. G. Humphreys, vice president; Dr. Ellsworth F. Waite, secretary, Dr. L. L. Bunker, Dr. H. B. Dickens, and Dr. Carl Lungerhausen.

Mr. E. R. Hood, chairman of the county hospital board, was a visitor and discussed the history of the planning, building and furnishing of the new Nassau County Hospital. He pointed out that the institution is well equipped for general surgery.

The Nassau County Medical Society is the latest affiliate of the Florida Medical Association.

PALM BEACH

Dr. P. S. Pelouze of Philadelphia, authority on gonorrheal control, was guest speaker at the meeting of the Palm Beach County Medical Society on the evening of December 10.

PASCO-HERNANDO-CITRUS

Dr. and Mrs. W. H. Walters of Lacoochee entertained the members of the Pasco-Hernando-Citrus County Medical Society at a quail dinner on Thursday evening, December 10.

At the scientific session which followed the dinner, clinical cases were reported by Dr. Walters, Dr. S. C. Harvard of Brooksville, and Dr. Claude L. Carter of Inverness. These cases were discussed by others present.

The annual election of officers was then held, which resulted as follows: president, Dr. W. Wardlaw Jones, Dade City; first vice president, Dr. Claude L. Carter, Inverness; second vice president, Dr. W. H. Walters, Lacoochee; secretary-treasurer, Dr. G. R. Creekmore, Brooksville. Censors: Dr. J. T. Bradshaw, San Antonio, for Pasco County; Dr. W. B. Moon, Crystal River, for Citrus County; Dr. S. C. Harvard, Brooksville, for Hernando County.

Dr. James L. Estes of Tampa was a guest of the Society at this meeting.

Dr. S. C. Harvard of Brooksville invited the society to meet at his home in January.

PINELLAS

A dinner meeting was held by the Pinellas County Medical Society on December 4, at which Dr. P. S. Pelouze of Philadelphia spoke on "The Clinical Aspects of Gonorrhea."

A round table discussion on "Gastrointestinal Malignancy" was held on December 18 at the home of Dr. C. S. Franckle. Dr. Franckle acted as moderator. The following resolutions were passed with respect to the death of Dr. George M. Lochner:

Whereas, it has pleased the Great Physician to call from our midst our friend and fellow-worker, Dr. George Mitchell Lochner, and

Whereas, his interest and presence will be continually missed in the meetings of our Society, be it

Resolved, that we, the members of the Pinellas County Medical Society, offer our profound sympathy and deep condolence to his bereaved wife and sister, and be it

Resolved, that a copy of these resolutions be sent to his wife, a copy be spread upon our minutes and a copy be sent to the Florida Medical Association.

POLK

Dr. T. G. Simmons of Auburndale was elected president of the Polk County Medical Society at its annual meeting at the Lake Region Hotel in Winter Haven on December 3. Other officers elected were: Dr. J. G. Gilchrist, Bartow, vice president; and Dr. Edgar Watson, Lakeland, secretary-treasurer.

Dr. P. S. Pelouze of Philadelphia was the principal speaker.

SEMINOLE

The regular meeting of the Seminole County Medical Society was called to order by the president, Dr. George H. Putnam, at 7:30 p.m., December 8, at the Fernald-Laughton Memorial Hospital, Sanford. Present were Drs. Putnam, Dame, Smith, Puleston, Langley, Garner, and Selman. Lieut. Com. (Jr.) Leonard (MC) of the Naval Air Base was a visitor.

A business meeting was held, during which resolutions were presented by Drs. H. D. Smith, W. T. Langley and W. H. Garner on the death of a former member, Dr. Clifford Morgan Mitchell. A motion was made, seconded and carried to send a copy of these resolutions to Mrs. Mitchell, the Sanford Herald and to the Florida Medical Journal.

The scientific program consisted of a paper on "Syphilis," presented by the president, Dr. G. H. Putnam. It was enjoyed by the society, and discussed by several members.

RESOLUTIONS ON DEATH OF DR. C. M. MITCHELL

Whereas, on October 5, 1942, Almighty God saw fit to remove from our membership Dr. Clifford Morgan



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SURGERY—Two Weeks Intensive Course in Surgical Technique starting January 11 and 25, February 8 and 22, and every two weeks throughout the year.

MEDICINE—One Month Course in Electrocardiography and Heart Disease starting the first of every month, except August.

FRACTURES AND TRAUMATIC SURGERY—Formal and Informal Courses.

GYNECOLOGY—Two Weeks Intensive Course starting April 5; Clinical and Diagnostic Courses.

OBSTETRICS—Formal and Informal Courses.

OTOLARYNGOLOGY—Two Weeks Intensive Course starting April 19. Clinical and Special Courses.

OPHTHALMOLOGY—Two Weeks Intensive Course starting April 5.

ROENTGENOLOGY—Courses in X-ray Interpretation, Fluoroscopy, Deep X-ray Therapy every week.

UROLOGY—Two Weeks Course and One Month Course available every two weeks.

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Mitchell who was a charter member of our society, and

Whereas, we, as a profession have sustained a distinct loss in his passing, as has his wife, Mrs. Abbie Mitchell, together with his family and host of friends who mourn his passing; therefore be it

Resolved, that the Seminole County Medical Society extend to his widow and other relatives our sincerest sympathy and may Almighty God give them comfort.

Dr. Mitchell was loyal to his host of friends, never shirking anything for their comfort. He was a graduate of Emory University in the class of 1916. He practiced his profession for a time in Montezuma, Georgia, coming to Sanford about twenty-three years ago, where he continued in the profession until his passing. He was laid to rest in Evergreen Cemetery in this city. The services were conducted by the Rev. J. A. Tolle, pastor of the First Methodist Church, assisted by the Rev. Grantham of the First Christian Church.

Be it Resolved that a copy of these resolutions be mailed to his widow, Mrs. Abbie Mitchell, and a copy furnished the Florida Medical Journal for publication.

Signed by Committee:
H. D. Smith,
Theo. Langley,
Wade H. Garner.

ABSTRACT DEPARTMENT

Members of the Florida Medical Association who have had articles published in out-of-state medical journals are requested to forward such journals or reprints to Box 1018, Jacksonville, for abstracting in this department.

NASAL AND SINUS SURGERY; A CRITICAL REVIEW OF THE CAUSE OF UNSUCCESSFUL END RESULTS, HOLLENDER, A. R., MIAMI BEACH, SOUTH. M. J. **35**: 363-372 (APR.) 1942.

Based upon data obtained from questionnaires completed by 154 rhinologists, nasal surgical procedures effect a "cure" in 71 per cent of cases, and sinus surgical procedures in only 42 per cent. The causes of failure of nasal and sinus operations the author lists as follows: (1) incorrect diagnosis of the existing condition, (2) failure to take into account allergic factors or endocrinopathy, (3) lack of recognition of the role of organic diseases, such as diabetes, syphilis and tuberculosis, (4) hasty surgical intervention without adequate trial of nonsurgical treatment, (5) ill-performed or incomplete operation and (6) inadequate postoperative management.

The author stresses the importance of allergic factors being duly evaluated in each case before an operation is advised or undertaken. "The role of allergic factors in nasal and sinus conditions is now so prominent that even if the indications are positively surgical, the allergic aspect usually receives first consideration." He points out, however, that allergic treatment is often more successful if indicated surgical intervention has been followed out.

The author urges more detailed studies in each case to enhance the accuracy of diagnosis, with more careful selection of the patient for the operation as well as proper selection of the operation for the patient. He deplores the tendency of some rhinologists to "push" a certain type of operation because of personal preference rather than because of scientific rationalization. In addition to an allergic survey in each case, he believes the role of possible endocrine imbalance should be considered. The need for more rational application of surgery and for modifying classical operative technics in accordance with present knowledge of nasal physiology is stressed. Normal function should be preserved as far as possible. He notes that more adequate postoperative care may improve the surgical end result in some instances.

ADVERTISERS' NOTES

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The Treasury Department has presented to the men and women of American Optical Company a Minute Man flag to be flown above the AO plant in recognition of their purchases of United States War Bonds.

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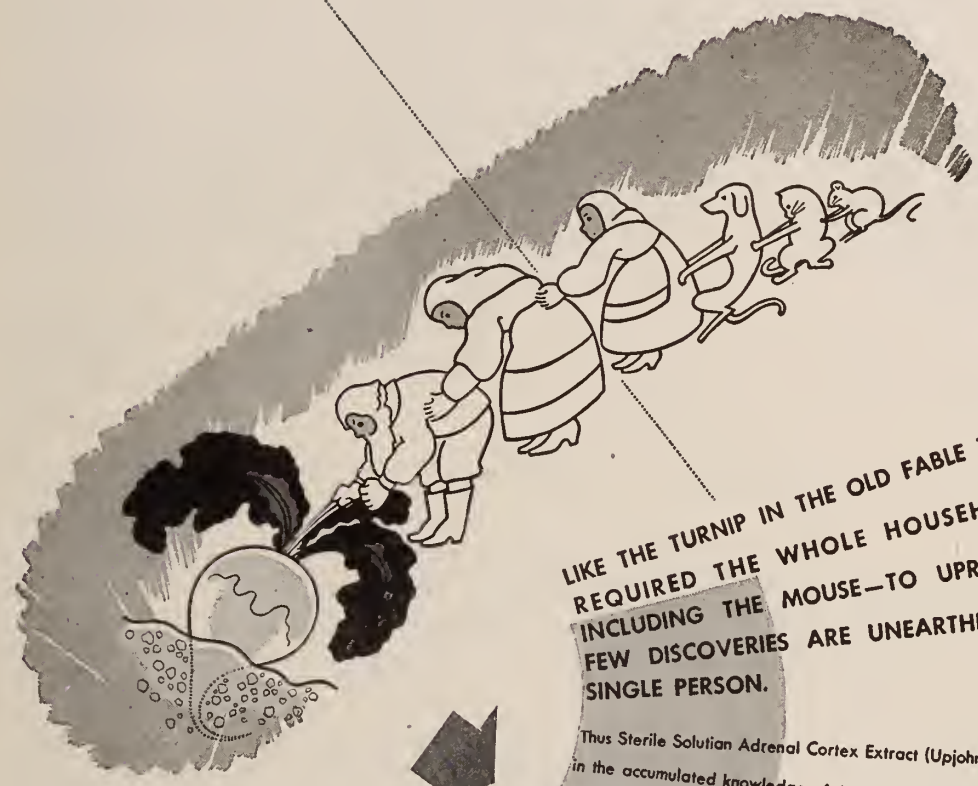
A representative of Daniel F. Doherty, state administrator for the sale of war bonds in Massachusetts for the Treasury Department, presented the flag to a delegation of AO people. Representing AO's management and employees, these people included George B. Wells, Ira Mosher, C. O. Cozzens, E. E. Williams, Bernard Fox, John Toomey, Helen Gray, Mary Costa, Fatina Costa, Theresa Bernier, Lorraine Champeau, Alice Spencer, Anna Laconto, and Victoria Sieczkowski.

BOOKS RECEIVED

Acknowledgment of books received will be made in this column and this will be deemed by us a full compensation to those sending them. A selection will be made for review as expedient.

HOW TO LIVE IN THE TROPICS. By Virginia Lloyd Hunt. Here is the first American handbook to cover fully the practical problem of living in the tropics. It packs into a small space every kind of useful suggestion. The author puts into the book not only the result of her own experiences, but that of doctors who have had many years of practice in tropical regions. She has had invaluable assistance from the health education departments of large organizations with field offices, and from staff members of the Rockefeller Foundation, Gorgas Institute, Pan American Union and Yale and Harvard Schools of Tropical Medicine. Cloth. Price, $2.00. Pp. 178. New York: Harcourt Brace and Company, 1942.

CONSTITUTION AND DISEASE; APPLIED CONSTITUTIONAL PATHOLOGY. By Julius Bauer, M. D., Professor of Clinical Medicine, College of Medical Evangelists, Los Angeles, Calif. The constitutional approach to medical problems is becoming more recognized. However, much of the discussion deals with general principles rather than with specific applications. Here is a preview of tomorrow's medical practice—a book that is different, in that it applies what is known of constitutional factors to individual patients as you see them in your office. Cloth. Price, $3.50. Pp. 220, with 5 illustrations. New York: Grune & Stratton, Inc., 1942.



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PRESIDENT'S MESSAGE

Dear Friends:

May I take this opportunity to wish for each of you a Happy New Year. While our thoughts and actions are keenly affected by the war, the greeting cannot be untinged. However, as we go about enriching the lives of those less fortunate than we, we shall find joy, and the year 1943 will be a happy year.

This year, because of the difficulty in traveling, no District Meetings were held. I feel the need of this contact with the different groups in the State. As your publicity chairman states, we need your cooperation more than ever this year. May I also urge upon you the necessity of good reports. Those of you who have not yet sent in your list of officers and chairmen are asked to do so, please.

I have one more request to make. Won't you try to have your Auxiliary contact the doctor's wife whose husband is in the service? A note from her own Auxiliary members will mean much even if she is at home.

May God grant us peace in the coming year.

Your State President,

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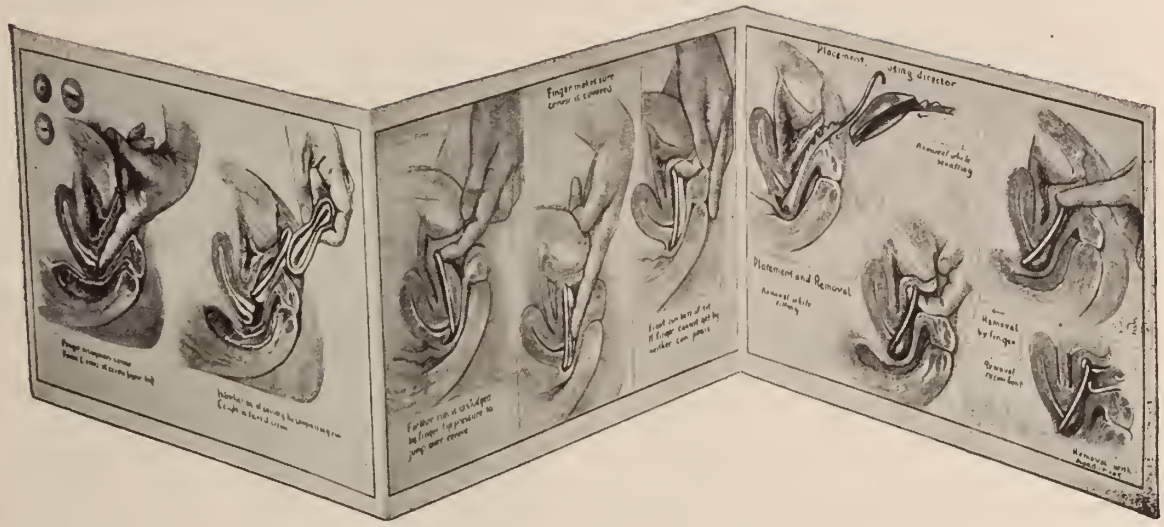
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AUXILIARY PUBLICITY

To County Press and Publicity Chairmen:

The national chairman, Mrs. George H. Ewell, has requested a full report of each auxiliary meeting held in the state. Please follow the outline below in writing publicity for your local press, and send a copy to your state chairman not later that the 15th of each month. In order for our state to make a good showing, we must function as a county unit; each officer and chairman must do her part so that the state as a whole may be able to maintain a high standard and receive full credit from the National. I trust it will not be necessary to remind you again of your duty to your state auxiliary. Let us pull together and make this one of the best years in the history of our organization. We have a splendid president and she needs our cooperation and support. "Every auxiliary doing defense work," is one of our major objectives this year; your interest in your auxiliary is a test of your citizenship. Are you a good American? If so, give your president the fine backing she merits. Thank you.

Outline to follow:

(a) Name of county auxiliary
(b) Place of meeting
(c) Date of meeting
(d) Number present
(e) Name of speaker
(f) Subject of address
(g) Questions discussed
(h) Actions taken thereon
(i) Special projects undertaken
(j) Report how material sent by chairmen of committees of state auxiliary is used.

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STATE AND SECTIONAL MEETINGS

SOCIETY	PRESIDENT	SECRETARY	ANNUAL MEETING
Florida Medical Association	Gilbert S. Osincup, Orlando	Shaler Richardson, Jacksonville	Jacksonville, April 15-16, 1943
Florida Medical Districts:			
A—Northwest	Courtland D. Whitaker, Marianna	Stewart Thompson, Jacksonville	Tallahassee, Postponed
B—Northeast	L. Y. Dyrenforth, Jacksonville	" " "	Ocala, Postponed
C—Southwest	Edgar Watson, Lakeland	" " "	Sarasota, Postponed
D—Southeast	William Y. Sayad, W. Palm Beach	" " "	Miami, Postponed
Alabama Medical Association	H. B. Searcy, Tuscaloosa	D. L. Cannon, Montgomery	Birmingham, Apr. 20-22, 1943
Georgia, Medical Assn. of	James A. Redfearn, Albany	E. D. Shanks, Atlanta	Atlanta, May 11-14, 1943
Florida—			
Section, Am. College Phys.	R. H. Knowlton, St. Petersburg	Kenneth Phillips, Miami	To Be Announced
Dental Society, State	A. Malcolm Smith, D.D.S., Tampa	H. L. Cartee, DDS., Miami	
Derm. and Syph., Soc. of	Wiley M. Sams, Miami	Lauren M. Sompayrac, Jacksonville	To Be Announced
East Coast Medical Association	T. C. Kenaston, Cocoa	I. M. Hay, Melbourne	Postponed
Hospital Association	Mr. Ernest G. McKay, Tampa	Mr. R. L. Martin, St. Petersburg	Tampa—Postponed
Industrial Surgeons, Assn. of	Frank D. Gray, Orlando	Richard H. Walker, Orlando	To Be Announced
Medical Postgraduate Course	Turner Z. Cason, Jacksonville	Chairman	
Nurses Association, State	Mrs. Ann Thompkins, Leesburg	Miss Madalee Hazel, St. Petersburg	
Ophthal. & Otol., Soc. of	Shaler Richardson, Jacksonville	C. E. Dunaway, Miami	To Be Announced
Pathological Society	L. Y. Dyrenforth, Jacksonville	Iva C. Youmans, Miami	To Be Announced
Pediatric Society	Ludo von Meysenbug, Daytona B.	Robert Blessing, Ft. Lauderdale	To Be Announced
Pharmaceutical Association, State	Mr. Emmett L. Brown, Palatka	Mr. R. Q. Richards, Ft. Myers	
Public Health Association	W. H. Pickett, Jacksonville	Lloyd N. Harlow, Jacksonville	Postponed
Radiological Society	John N. Moore, Ocala	Walter A. Weed, Orlando	To Be Announced
Railway Surgeons' Association	Frank D. Gray, Orlando	W. C. Page, Cocoa	To Be Announced
Tuberculosis & Health Assn.	Mr. E. M. Newald, Orlando	Mrs. C. R. Whitaker, Eustis	To Be Announced
Chattahoochee Valley Med. Assn.	Herbert E. White, St. Augustine	Robert B. McIver, Jacksonville	Postponed
Gulf Coast Clinical Society	G. G. Oswalt, Mobile, Ala.	C. L. Rutherford, Mobile, Ala.	
S.E. Sec., Am. Cong. Phys. Ther.	John J. McGuire, Pensacola	Kenneth Phillips, Miami	
Southeastern Surgical Congress	Alton Ochsner, New Orleans	B. T. Beasley, Atlanta	Postponed
Southern Medical Association	Harvey F. Garrison, Jackson, Miss.	Mr. C. P. Loranz, Birmingham	To Be Announced
Suwannee River Medical Society	L. J. Arnold, Jr., Lake City	H. S. Howell, Lake City	

COMPONENT SOCIETIES BY DISTRICTS

	SOCIETY	PRESIDENT	SECRETARY	MEETING DATE	MEMBERS Total	MEMBERS Paid	COUNCILOR
A	Bay	J. Powell Adams, M.D. Panama City	J. O. Barfield, M.D. County Health Unit Panama City		11	4	
	Escambia *Santa Rosa	Alvyn W. White, M.D. 24 W. Chase St. Pensacola	Lee Sharp, M.D. 24 W. Chase St. Pensacola	2nd Tuesday 8:00 P.M.	52	15	A-1-43 C. D. Whitaker, M.D. Marianna
	Franklin-Gulf		J. R. Norton, M.D. Port St. Joe	3rd Tuesday Odd Months	4	0	
	Jackson *Calhoun	W. R. Wandeck, M.D. Marianna	R. N. Joyner, M.D. Marianna	2nd Tuesday 7:30 P.M.	12	1	
	Walton-Okaloosa	A. G. Williams, M.D. Lakewood	R. B. Spires, M.D. DeFuniak Springs	3rd Thursday 8:00 P.M.	6	0	
	Washington-Holmes	N. J. Dawkins, M.D. Vernon	B. W. Dalton, M.D. Vernon		6	1	
	Columbia *Baker, Hamilton	Harry S. Howell, M.D. Blanche Hotel Annex Lake City	Thomas H. Bates, M.D. Blanche Hotel Annex Lake City	1st Monday 7:30 P.M.	12	9	
	Leon-Gadsden-Liberty-Wakulla-Jefferson	G. H. Garmany, M.D. Midyette-Moor Bldg. Tallahassee	B. A. Wilkinson, M.D. Telephone Bldg. Tallahassee	Quarterly 3:00 P.M.	39	11	A-2-44 William D. Rogers, M.D. Chattahoochee
	Madison-Suwannee	Eustace Long, M.D. Madison	E. D. Thorpe, M.D. Madison		8	0	
	Taylor *Dixie, Lafayette	J. C. Ellis, M.D. Perry	Chas. A. O'Quinn, M.D. Perry	Last Friday 8:00 P.M.	5	0	
B	Alachua *Bradford, Gilchrist Union	R. E. Summitt, M.D. 122 No. Pleasant St. Gainesville	Chester F. Ahmann, M.D. 1043 W. Masonic Gainesville	2nd Wednesday 7:30 P.M.	29	8	
	Duval *Clay	T. Z. Cason, M.D. 2033 Riverside Ave. Jacksonville	F. A. Copp, M.D. 411 St. James Bldg. Jacksonville	1st Tuesday 8:15 P.M.	193	102	B-3-43 L. Y. Dyrenforth, M.D. Jacksonville
	Marion *Levy	T. Hartley Davis, M.D. 202 Commercial Bk. Bldg. Ocala	B. F. Drake, M.D. Professional Bldg. Ocala	3rd Thursday 12:30 P.M.	28	18	
	Nassau	Geo. A. Dame, M.D. Fernandina	E. F. Waite, M.D. Fernandina	2nd Wednesday 8:00 P.M.	7	100%	
	Putnam	J. Worth Brantley, M.D. Grandin	C. M. Knight, M.D. Palatka	2nd Tuesday Even Months 7:00 P.M.	10	2	
	St. Johns	W. D. Webb, M.D. 220 St. George St. St. Augustine	Charles C. Grace, M.D. East Coast Hospital St. Augustine	3rd Tuesday 8:30 P.M.	12	4	
	Brevard	G. T. von Colditz, M.D. Route 1 Cocoa	I. K. Hicks, M.D. Melbourne	3rd Wednesday	11	3	
	Lake *Sumter	H. S. Cherry, M.D. Center Hill	R. H. Williams, M.D. County Health Unit Eustis	1st Thursday 12:30 P.M.	19	8	B-4-44 Meredith Mallory, M.D. Orlando
	Orange *Osceola	T. E. McBride, M.D. Apopka	John A. Pines, M.D. 106 E. Central Ave. Orlando	3rd Wednesday 8:30 P.M.	93	40	
	Seminole	Geo. H. Putnam, M.D. Touchton Bldg. Sanford	Leland H. Dame, M.D. Co. Health Unit Sanford	2nd Monday 7:00 P.M.	12	4	
	Volusia *Flagler	W. C. Pay, M.D. 221 W. Rich Ave. DeLand	R. L. Miller, M.D. 258½ S. Beach St. Daytona Beach	2nd Tuesday 7:30 P.M.	44	17	
C	Hillsborough	T. C. Maguire, M.D. 104 S. Collins St. Plant City	James S. Grable, M.D. 811 Citizens Bldg. Tampa	1st Tuesday 8:00 P.M.	105	26	
	Manatee	M. M. Harrison, M.D. Professional Bldg. Bradenton	L. W. Blake, M.D. Bradenton	3rd Tuesday 7:00 P.M.	14	100%	C-5-44 Leland F. Carlton, M.D Tampa
	Pasco-Hernando-Citrus	W. W. Jones M.D. Dade City	G. R. Creekmore, M.D. Brooksville	2nd Thursday 7:00 P.M.	11	1	
	Pinellas	W. C. McConnell, M.D. 313 First Federal Bldg. St. Petersburg	Annette M. Feaster, M.D 166 Fourth Ave. N. E. St. Petersburg	1st and 3rd Fridays 6:30 P.M.	106	67	
	Sarasota	O. H. Cribbins, M.D. 138 N. Link Sarasota	A. O. Morton, M.D. Commercial Court Sarasota	2nd Tuesday 8:30 P.M.	19	9	
	DeSoto-Hardee-Highlands-Charlotte-Glades	M. C. Kayton, M.D. Wauchula	C. H. Kirkpatrick, M.D. Box 454 Arcadia	Quarterly	20	3	
	Lee *Collier, Hendry	H. Quillian Jones, M.D. 18 Leon Bldg. Fort Myers	W. H. Grace, M.D. Box 907 Fort Myers	3rd Tuesday 7:30 P.M.	17	6	C-6-43 Edgar Watson, M.D. Lakeland
	Polk	T. G. Simmons, M.D. Corlett Bldg. Auburndale	Edgar Watson, M.D. Box 1021 Lakeland	2nd Wednesday 1:00 P.M.	59	18	
D	Palm Beach	O. B. Hazen, M.D. Comeau Bldg. W. Palm Beach	D. W. Martin, M.D. 618 Comeau Bldg. W. Palm Beach	4th Monday 8:00 P.M.	69	18	
	St. Lucie-Okeechobee-Indian River-Martin	R. C. Boothe, M.D. Box 408 Ft. Pierce	Adrian M. Sample, M.D. Box 176 Ft. Pierce	3rd Thursday 8:00 P.M.	17	6	D-7-43 William Y. Sayad, M.D. West Palm Beach
	Broward	D. W. Harris, M.D. 420 Sweet Bldg. Ft. Lauderdale	O. C. Brown, M.D. 915 Sweet Bldg. Fort Lauderdale	2nd Wednesday 8:00 P.M.	41	14	
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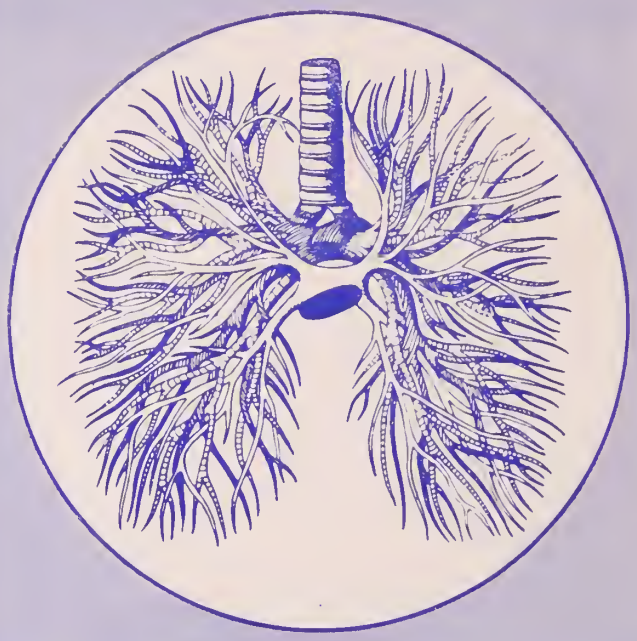
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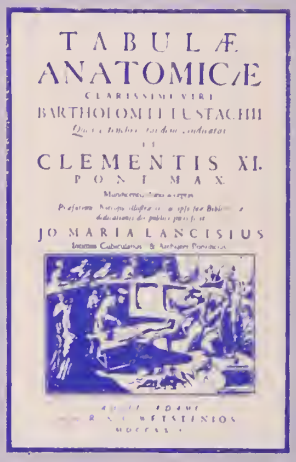
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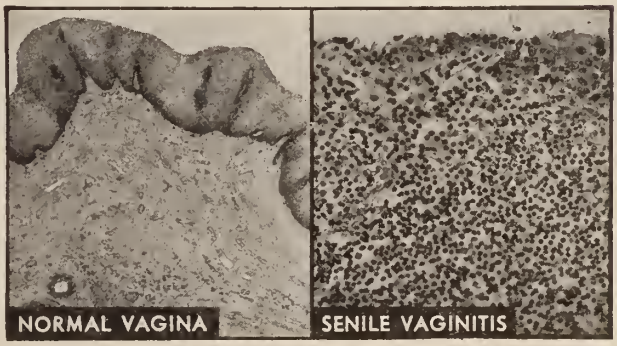
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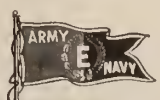
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ARTERIAL HYPERTENSION

WEBSTER MERRITT, M. D.
JACKSONVILLE

The subject to be presented is one of considerable interest to the general public as well as to the medical profession. So much has been said and written about blood pressure it is not surprising that many patients are becoming blood pressure conscious. All physicians are acquainted with the patient who requests frequent determinations of blood pressure and dwells and reflects upon each small variation. On the other hand, they are also well acquainted with the patient who seems proud of his high blood pressure and brags that he has had it for many years and today is apparently as well as he was before its inception. These observations prompt one to ask: What is the significance of hypertension? However, before elevation of arterial blood pressure can be discussed properly, it is important to have an understanding of what is meant by normal blood pressure.

The statement "One's blood pressure should be one hundred plus his age" has been widely quoted and apparently is interpreted literally by many persons. Physicians, too, are vague with regard to what constitutes normal blood pressure, and even cardiovascular experts have divergent opinions for, until recently, no comprehensive study of the problem had been made. In 1939, Robinson and Brucer[1] published a statistical and clinical study on the range of normal blood pressure which has done a great deal to clarify this important problem. The results of their studies in some instances are rather startling, but so far their conclusions have stood the test of critical analysis.

These workers studied over eleven thousand persons in the Chicago area whose health was comparable to that of any group taken at random from the total population. Five hundred out of this group of eleven thousand were followed with repeated readings of the blood pressure for from five to ten years, and an appraisal of mortality was made at the various blood pressure levels. It was assumed that normal blood pressure should be consistent with the longest possible life, and the conclusions were that blood pressure for men and women should range from 90 to 120 mm. of mercury systolic and from 60 to 80 mm. diastolic; that a normal person attains his mature blood pressure at about adolescence and maintains it throughout life except for a slight rise at about the twentieth year; that transient elevations of blood pressure often indicate beginning hypertension; and that slightly more than 40 per cent of the adult population is either actually or incipiently hypertensive. More recently, Robinson[2] published a paper in which he concluded that so-called hypotension is the ideal blood pressure level. Insurance statistics[3a] regarding the relation of blood pressure to longevity are noteworthy and somewhat bear out the conclusions of Robinson and Brucer as to what constitutes normal blood pressure (table 1).

TABLE 1

Systolic Blood Pressure	*Per Cent of Expected Mortality Rate*
140 mm. Hg.	181 (%)
130 mm. Hg.	114
120 mm. Hg.	86
110 mm. Hg.	65

The underlying pathologic lesion in arterial hypertension is spasm or sclerosis of the tiny arterioles in the body. The cause of arteriolosclerosis is, however, not always clear and has been the subject of much study and interest.

From the standpoint of etiology hypertension may be separated into two large divisions: first, that of known cause such as hypertension associated with nephritis, adrenal or pituitary tumor, polycystic kidneys, coarctation of the aorta, increased intracranial pressure and section of the moderator nerves; and second, that of unknown etiology which is called essential hypertension. The studies of Goldblatt[4] on dogs, begun in 1932, have contributed a great deal to better understanding of elevated blood pressure. By placing a clamp on the renal arteries and rendering the kidneys *ischemic*,* he produced a hypertensive state in dogs which closely resembled essential hypertension in man. The mechanism of the production of this hypertensive state is of interest. Without diminishing the excretory power of the

Delivered before the Five Counties Medical Society, Wakulla Springs, July 16, 1942.

*Ischemic is italicized for there has been evidence presented which indicates that a reduction of arterial pulse pressure within the kidney rather than ischemia is the abnormality which produces hypertension.[5]

kidneys, hypertension was produced consistently and hence could not be attributed to decreased renal function. Furthermore, it was proved that the nervous system had no essential role in the development of this type of hypertension, for neither total denervation of the kidneys nor destruction of the cord below the level of the fifth cervical vertebra prevented its development. Accordingly, it has been assumed that this type of renal hypertension is brought about by the liberation of some chemical substance from the *ischemic* kidney.

As long as forty-four years ago, such a substance was isolated from the normal kidney by Tigerstedt and Bergman[6] and was named renin (pronounced with a long e to distinguish it from rennin, which is present in the gastric juice). This was an important work, but experimental studies gave doubtful and inconsistent results because the pressor effect of renin is neutralized by general anesthesia, and there are certain depressor substances in renal extracts which, if not removed, will mask its effect. Since Goldblatt's work there has been much evidence that a renin-like substance is liberated in increased amounts by the kidneys of experimental animals made hypertensive by interfering with the renal blood supply,[7, 8, 9, 10, 11] but attempts to demonstrate an increased amount of renin in renal extracts from human hypertensive patients have failed,[12] and the pressor activity of blood from hypertensive patients has not yet been shown to be due to renin.

Apparently, renin requires the presence of an activator substance normally found in plasma before its full effect is produced.[13, 14] This activator substance reacts with renin to produce the true pressor substance called angiotonin by Page and Helmer,[15] and hypertensin by the South American workers.[16]

A vicious circle has been established (fig. 1) for *ischemia* of the kidney produces renin, which in turn produces more ischemia of the kidney.[17, 18] This is another way of saying that hypertension produces more hypertension; hence that which was a benign reversible process during the early period following its inception, later becomes a malignant permanent state.

The most important symptoms associated with hypertension are headaches, dizziness, pain in the chest and a feeling of anxiety. The headaches are usually of two types: migraine and occipital. Migraine headaches are of common occurrence,

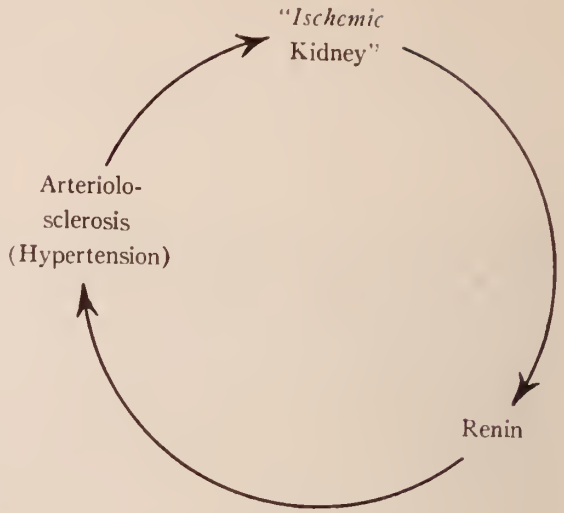


Figure 1

are often precipitated in persons who have a family history of migraine and, if in existence prior to the hypertension, are usually made worse by the elevation of blood pressure. The occipital headaches with which the patient with hypertension frequently suffers often awaken him in the early morning, or are present upon his awakening, and usually wear off during the course of the day. Dizziness, transient unsteadiness, lightheadedness and uncertainty are also commonly associated with hypertension, while pain in the chest is complained of occasionally and is described as a continual distress, which is not anginal in origin. The patient with hypertension frequently exhibits an anxiety state, but it is felt that this may be due more to the knowledge that he has hypertension than to the physiologic effect of the condition itself.

The important complications of hypertension are three: disease of the heart, brain and kidney. The heart probably suffers more often than any other organ, its left ventricle having to bear the brunt of the burden in working against increased pressure. Cerebral hemorrhage occurs commonly as the result of the rupture of one of the vessels in the brain which has been subjected to stress and strain caused by increased intravascular tension. So-called vascular nephritis or nephrosclerosis is observed in the late stages of essential hypertension.

The treatment of the patient with hypertension is a subject to which a great deal of space in the literature of recent years has been devoted. Surgery has made three approaches to the problem of treatment: first, nephrectomy in unilateral disease of the kidney, second, revascularization

of the kidney, and, third, sympathectomy. Unilateral disease of the kidney is usually caused by pyelonephritis, but this disease can be demonstrated in not more than 2 or 3 per cent of the patients suffering with hypertension. Even when unilateral disease of the kidney can be demonstrated, nephrectomy must be performed before the hypertension has existed for a long time; otherwise the operation may fail to achieve the desired result.[17, 18, 19] Revascularization of the kidney by anastomosing the omentum, muscle, or spleen to the ischemic kidney so far has been carried out successfully only in experimental animals. Surgery of the sympathetic nervous system[20, 21] has been used with some measure of success, many operative procedures having been described, but the patients who receive the most benefit from this type of surgical treatment apparently are those who have progressive disease in the early stage. Even when the patient is carefully selected by studying the response of the blood pressure to sleep and sedation, the results of surgery of the sympathetic nervous system are often disappointing. Of the three surgical procedures mentioned, the first and second seem more rational than the third; with nephrectomy and revascularization an attempt is made to eradicate or relieve the cause of hypertension whereas with surgery of the sympathetic nervous system the treatment is at best palliative.

The medical approach to the problem of treatment is quite different. It would be ideal if a preparation were available which would strike at the cause of high blood pressure by overcoming increased arteriolar resistance and yet would not produce harmful or unpleasant side effects. When it was shown that animals which receive repeated injections of renin soon develop resistance to the substance and fail to respond with a rise in blood pressure, it was hypothesized that this phenomenon is due to the release of a substance elaborated in the kidneys which opposes the action of renin or angiotonin. Within the last few years Grollman, Williams and Harrison[22] have prepared with great difficulty a renal extract which is effective in lowering the blood pressure in hypertensive rats, dogs and human beings. Page and his associates,[23, 24] and the South American investigators[25] working independently also have prepared extracts from fresh kidneys and muscle and have demonstrated that it is effective in the reduction of blood pressure in subjects with hypertension. The fall occurs slowly and is dependent on the dosage; within three to five days after the treatment is discontinued, the blood pressure tends to rise again. Associated with the fall in blood pressure great symptomatic improvement is noted. The chemical nature of the active principle in these new extracts is unknown, but it apparently differs from that of the depressor tissue extractives which have been previously described. Unfortunately, the administration of these new extracts is sometimes accompanied by severe reactions resembling shock followed by fever; hence one cannot be sure yet that their blood pressure lowering properties are not due to pyrogenic or some other nonspecific effect which produces vasodilatation. And, too, these extracts are so difficult and expensive to prepare that they are not yet available for commercial or even general experimental use.

Many of the well known drugs which have been written about enthusiastically for the reduction of blood pressure are useless. Workers at the Mayo Clinic and Foundation recently made an interesting study.[26] Being cognizant of the fact that blood pressure is apt to vary from hour to hour and day to day without any specific treatment whatever, and also realizing that it is apt to respond to placeboes and to the encouragement the patient feels by the interest his physician shows in his affliction, they decided to study the effect of the so-called vasodilator drugs on patients with hypertension in a mental institution who would and could not know that they were being treated for high blood pressure. With almost no exception, they found that the drugs which have been advocated for the treatment of hypertension, such as the nitrites, the purine derivatives (theobromine and theophylline), the iodides and many others, are valueless.

Potassium thiocyanate, however, seems to be of value. While this drug was used as long ago as 1903[26] and became popular in the treatment of hypertension in 1925,[27] its rational use was not established until Barker[28] in 1936 described a method of determining the concentration of the cyanates in the blood. Its administration is indicated in patients under 60 years of age who have a rather severe type of progressive hypertension. The usual dose is 9 grains daily, but an adjustment of the dose to the individual patient must be made so that the concentration in the serum will range between 8 and 14 mg. per hundred cubic centimeters of blood. The mechanism of its action is unknown, but authorities

have reported that as long as the patient receives the drug, the blood pressure is appreciably lowered in about half the cases and symptoms are relieved in about three fourths of the cases.[29] My associates at Riverside Hospital in Jacksonville and I have become interested in the administration of potassium thiocyanate, and while our experience is yet limited and the number of patients is small, we observed that in somewhat less than 50 per cent of selected patients there was appreciable lowering of the blood pressure and in slightly more than 75 per cent symptomatic relief was obtained. Relief of severe occipital early morning headaches was the most striking subjective improvement noted. Potassium thiocyanate should not be administered when there is decreased renal function or advanced cardiac disease. In an occasional instance it may produce toxic effects manifested by nervousness, agitation, somnolence, exhaustion and mental confusion. It is reported that Means and his associates in Boston observed a colloid type of goiter which had developed in 15 patients during the period of administration of thiocyanate, but when the drug was discontinued, the glands regressed.

The general medical treatment of hypertension resolves itself into therapy directed by plain matter-of-fact common sense and good judgment. A regimen moderate in its restrictions is indicated, and the patient should be instructed to rest in bed at least nine or ten hours each night and from one to two hours during the middle of the day. An effort should be made to reduce all nervous stress and strain, and the patient should be advised to try to acquire a calm philosophic outlook on life. Many diets have been advised for the treatment of hypertension, but there is little evidence that food, unless it is consumed in excessive quantity, influences blood pressure to any degree. Protein and salt need not be restricted unless there are renal or cardiac complications. Reduction in weight of the obese patient is often beneficial and should be insisted upon if the patient is overweight. The role which tobacco plays in hypertension is variable, and before strictly interdicting its use, one might be wise to observe its effect on the individual patient. Alcohol and coffee in moderation, unless they act as stimulants, are probably not harmful. Caffeine is almost a specific for the relief of occipital headaches which occur in the early morning. Sometimes these headaches can be prevented if the patient sleeps with the head of his bed elevated from 12 to 18 inches. Finally, it should not be forgotten that phenobarbital or some other mild sedative given in small doses three or four times daily is at present one of the most effective symptomatic treatments for hypertension.

SUMMARY

This paper (1) presents some of the newer ideas of what constitutes an elevation of arterial blood pressure, (2) reviews some of the more recent concepts regarding the mechanism by which this elevation is produced, (3) describes the common symptoms, (4) discusses specific and general treatment and (5) makes a preliminary report on potassium thiocyanate therapy observed at Riverside Hospital.

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PYURIA IN CHILDHOOD

ITS SIGNIFICANCE AND TREATMENT

WARREN W. QUILLIAN, M.D.
CORAL GABLES

Infection of the urinary tract occurs commonly in childhood. In reviewing the reports of 527 consecutive urinalyses made in office routine during the regular physical examination of patients from June 1941 to January 1942 it was observed that 127 voided, uncentrifuged specimens of urine contained more than 10 pus cells per low power microscopic field. In many of the cases of this series there were no subjective complaints referable to the bladder or kidneys.

TABLE I

527 Consecutive Urinalyses (June 1941—January 1942)

Pyuria per L. P. Field (uncentrifuged)	Number	Per cent
0-10	400	75.9
10-50	81	15.4
50-100	22	4.2
100 plus	24	4.5

Read before the Sixty-Ninth Annual Meeting of the Florida Medical Association, held at Hollywood, Apr. 13, 14 and 15, 1942.

It is the responsibility of the attending physician to determine the significance of pyuria in a given case. Although in many instances pyelonephritis may, with the application of simple therapeutic principles, run a self-limited course, it is important that the urine be free from bacteria as well as pus. Campbell[1] stated that 90 per cent of urologic lesions in the young result from anomalies in development, urinary infections, or a combination of these two factors.

PREDISPOSING FACTORS

Acute intestinal upsets, infections of the upper part of the respiratory tract, malnutrition, or stasis within the genitourinary tract caused by anomalous development predispose to acute pyuria or to recurrent exacerbations of chronic pyuria. Bacteria and pus may appear in the urine through two avenues of approach: the blood stream or lymph vessels, and the urethra. Increased incidence among girls (relatively short urethra) and the frequent culture of colon bacilli from infected urine indicate that the urethral or ascending route is more common.[2] So long as bacteria are present in the urine, one may expect recurrences of infection.

CLINICAL SYMPTOMS

There is no definite syndrome to herald the presence of pyuria. Hyperpyrexia, restlessness and pallor may be noticed in early infancy. Often the condition is discovered only by repeated urinalyses. Older children may complain of localized symptoms such as dysuria or tenderness in the region of the bladder and kidney. The temperature curve is frequently of the septic or spiked type, indicating fever that is remittent or intermittent in character. Such associated symptoms as vomiting, diarrhea and anorexia may be observed. Objectively, in addition to the urinary findings, there is usually a polymorphonuclear leukocytosis.

DIAGNOSIS

Diagnosis is simple, requiring merely a microscopic study of the urine. It is important to know the location of the pathologic condition and the identity of the etiologic organism. To this end culture of the urine and a stained smear of the sediment are indispensable in acute cases. Prolonged pyuria requires an adequate urologic investigation and close cooperation between the physician and the urologist. Intravenous urography, retrograde pyelograms, cystoscopy and other sim-

ilar procedures may be necessary to determine the cause of persistent pyuria.

The value of any laboratory diagnostic method may be measured in terms of its help to the practitioner in solving his clinical problems. It is an aid in modern medical practice, but should be used only as a link in the chain of clinical evidence.

In the diagnosis of urinary infections much information can be obtained by the pediatrician or the physician in general practice with the use of relatively simple equipment. Visual examination of the gross specimen of voided urine may reveal, with a two glass test, some evidence concerning the location and extent of the pathologic condition. If the cloudiness is due to phosphates, the addition of a few drops of acetic acid will cause rapid clearing. A smear should be made from a centrifuged portion of the second glassful of urine. Simple Gram stain suffices. Identification of the organism is important in the selection of the proper treatment. Helmholz[3] pointed out that the only materials necessary for a bacteriologic cure of pyuria are (1) a sterile test tube, (2) a sterile catheter, (3) a tube of plain agar and (4) a microscope. The agar slant can be incubated in the physician's vest pocket for twenty-four hours. If bacterial colonies appear, infection in the urine is still present.

Obstruction in the genitourinary tract predisposes to infection. If it is present, one should determine the blood urea and phenolsulfonphthalein output. Radiographic studies may reveal the presence of a stone or similar pathologic condition. Cystoscopy and retrograde pyelography will indicate obscure pathologic change and will serve as valuable aids in diagnosis. A thorough urologic investigation is desirable in any child in whom persistent pyuria resists proper medical therapy, or in whom there is constant disturbance of normal urinary function.

Some of the more common causes of obstruction and consequent urinary infection with pyuria have been listed by Campbell:[1]

1. Tight prepuce (phimosis) or meatus.
2. Stricture of urethra.
3. Congenital valves and contracture of the vesical outlet.
4. Spina bifida occulta.
5. Neuromuscular disease (cord bladder).
6. Bladder stone and diverticula.
7. Congenital stricture or stone in the ureter.
8. Aberrant blood vessels.
9. Stones in kidney.
10. Chronic suppurative pyelonephritis.
11. Tuberculosis.
12. New growths.

In chronic pyuria, one should assume the presence of a congenital anomaly until thorough study has proved or disproved this assumption.

TREATMENT

Helmholz[3] listed as fundamental in the proper treatment of pyurias:

1. Eliminate bacteria and their toxins by washing out the urinary tract.
2. Increase the immunologic response of the individual by proper diet and by specific therapy.
3. Administer appropriate medication, acidification or alkalinization of the urine.
4. Search for and remove, if possible, any foci of infection.
5. In collaboration with a urologist, relieve stasis within the urinary tract by application of instrumentation or proper surgical procedures.

Many so-called urinary antiseptics have been introduced to the medical profession during the past thirty years. Administration of some of these has yielded, in my experience, disappointing results. The child should not be considered cured until two successive negative cultures of catheterized specimens of urine have been obtained.

Simple procedures, such as the increased intake of fluids and the rapid changing of the reaction of the urine, may often be useful in treatment.

Sulfonamide therapy is of particular value in the treatment of acute pyuria. Selection of the drug is influenced by the type of organism found in the urine. Sulfanilamide is effective against most of the strains causing infection of the urinary tract except the Streptococcus faecalis. Sulfathiazole has proved especially helpful in its bacteriostatic effect upon the staphylococcus as well as most of the causative organisms, including the Streptococcus faecalis. Results with sulfadiazine have also been satisfactory. Sulfapyridine more frequently causes nausea or vomiting, and has no advantage over other sulfonamide drugs in chemotherapy. Long and Bliss[4] questioned the assertion by Helmholz and Osterberg[4] that the sulfonamide compounds are more effective in an alkaline medium. The intake of fluids should not be restricted during their administration. The average dose is from ¾ to 1 grain per pound of body weight per day. When stasis is present, permanent sterilization of the urine is difficult to obtain. Caution should be exercised in the administration of these drugs to patients with reduced renal function.

Mandelic acid is of particular value in treating infections caused by organisms of the gram-negative bacilli group (colon) and Streptococcus

faecalis. Its effectiveness is influenced materially by the reaction of the urine. The elixir, syrup and calcium mandelate are the forms usually administered. A concentration of 0.5 to 1.0 per cent in the urine should be maintained for several days. If the reaction of the urine is controlled below 5.2, smaller doses of the drug accomplish better bacteriostasis. Nausea and vomiting sometimes occur. The reaction of the urine can be controlled by concurrent administration of ammonium chloride or nitrate. The average dose is 1 Gm. (15 grains) of the ammonium or calcium mandelate for each hundred cubic centimeters of urine excreted in twenty-four hours. Infection caused by the Proteus ammoniae is apparently uninfluenced by mandelic acid therapy because this species is associated with an alkaline urine. The drug may be given successfully in suppository form.

Nutritious diet, adequate rest and the usual hygienic measures essential to proper treatment of infections elsewhere in the body are requisite in the management of pyuria. Genitourinary anomalies and pathologic changes causing obstruction require careful study and appropriate treatment by a competent urologist.

SUMMARY

Pyuria is frequently encountered in medical practice.

Anomalies of development, alone or in combination with infection and obstruction, constitute causes of persistent pyuria in children. These factors present a challenge to the diagnostic acumen of the physician.

Careful supervision and study by the pediatrician and close cooperation with the urologist are important. A bacteriologic cure is essential to successful management of this disease.

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DISCUSSION

Dr. Luther W. Holloway, Jacksonville: Dr. Quillian, in his usual fine way, has presented the subject of pyuria in infancy and childhood in a comprehensive manner.

One frequent predisposing factor in the causation of pyuria is chilling of the body. He did not stress this factor sufficiently.

In infants and children who have been in the area in which malaria is endemic pyuria must be positively differentiated from malaria. In the latter infection pyuria is frequently present and must be differentiated by careful studies of the blood.

My first slide illustrates a case of chronic pyuria in a six month old girl. This condition had existed since birth, the symptoms manifested being high fever, recurrent convulsions and great numbers of pus cells in the urine shown microscopically. At 6 months of age this child was placed in my care, and Dr. Robert B. McIver was immediately asked to make a urologic study of the case. As the slide shows, hydronephrosis on the right side was present. There was an obstruction at the ureteropelvic juncture which had caused the condition. One dilatation sufficed to permit proper drainage and great diminution in the hydronephrosis, as shown in slide 2. After the dilatation the clinical condition improved. The second set of films four months subsequently revealed diminution of about one half in the hydronephrosis. This child is now fourteen years of age and is perfectly well. In this type of case the magic sulfonamides would not have effected a cure. Mechanical relief of the obstruction by the urologist was imperative for a cure. At ten years of age this child had a transitory pyuria which cleared up in three days with ordinary medication.

The following slides represent a condition in a 4 month old boy whose illness had dated from birth. This child had high fever and multitudinous pus cells in the urine; he showed serious clinical effects of the infection. The girl, in spite of her long illness was in an excellent state of nutrition and well developed, but the little boy showed definite effects of the strain.

Dr. McIver studied the second case thoroughly and readily determined that a stricture at the ureterovesical juncture and, as a result, bilateral hydroureter and hydronephrosis were present. He was of the opinion that this condition was due to congenital valves in the posterior urethra. When Dr. McIver reported the results of the examination, the parents, as people frequently do, became frightened and worried and under family pressure took the child to a northrn clinic where he was operated on by one of the leading urologists of the country. His procedures, we think, were not well directed in that he used plastic surgery in an attempt to straighten and reduce the caliber of the ureters with no effect on the obstruction. So the child came back home, and Dr. McIver relieved the obstruction at the ureterovesical juncture. This boy is now twelve years of age, plays baseball and football, and performs all other activities of a normal child. Nevertheless, he has to wear a catheter in the bladder.

These two cases emphasize the situations that can exist, but we think that we investigated these children early enough to prevent the subsequent destruction of the kidneys. It is our opinion that any patient with pyuria which persists longer than two weeks should have a thorough study by a competent urologist.

Dr. Louis M. Orr, Orlando: It is always a great pleasure to have the opportunity to discuss a medical essay in which the subject has been broadly covered and clearly presented. Dr. Quillian is certainly to be complimented on his bringing to the attention of the general medical profession in such a concise manner the subject of infections of the urinary tract in children.

In speaking from the standpoint of a urologist I can only reemphasize the many points in diagnosis and treatment already mentioned and elaborate somewhat upon the results to be expected from urologic investigation and subsequent treatment.

The questions might well be asked: When should a cystoscopic examination be considered necessary? How long is it safe to continue medication without injury to the patient? What is the criterion of cure?

To the first question the answer would be: whenever the pus and bacteria fail to disappear after the use of the various forms of urinary antiseptics or when the patient has repeated exacerbations or attacks of urinary infection. To wait and hope for time to effect a cure "as the child grows older" is to fail in responsibility to the patient. Irreparable damage to the urinary tract may take place during this period.

The question of how long to use oral medication without injury to the patient can be answered by remembering that the action of the sulfonamide drugs is rapid. If no favorable results are obtained in a few days, it is more than likely that the drug will not be effective. The continuation of these drugs over a period of weeks may sometimes result in the development of agranulocytosis or other complications and make the patient even less resistant to the infection. Mandelic acid also exerts its bactericidal properties in a few days, providing that the drug appears in the urine in a concentration of from .5 to 1 per cent, with an associated hydrogen ion concentration of 5.2 or below. The bactericidal properties of all the other so-called urinary antiseptics are negligible and can only be thought of as exercising an occasional bacteriostatic effect. If, at the end of two weeks of alternating the drugs mentioned no improvement has been noted, a urologic investigation should be considered.

The criterion of cure is not only the disappearance of pus from the urine but also the disappearance of organisms. At least two cultures should be negative for bacterial growth before the patient should be considered cured.

A correct anatomic diagnosis in chronic pyuria can be made only by a complete urologic investigation. Residual urine may be present, or roentgen examination may demonstrate urinary calculi. Although excretory urography will often suffice to establish the diagnosis, in most instances it must be considered only as a preliminary investigation from which to obtain as much information as possible before the cystoscopic examination. A complete urologic examination should include ureteral catheterization, divided renal function tests, cultural studies from each kidney and pyelograms.

This examination can be performed in three fourths of all children without general anesthesia. Caudal anesthesia may be used in boys of three years and over. Pentothal sodium, administered intravenously, is easily used in children. Fear of an unfortunate reaction need never be considered a contraindication in a child. Reaction to instrumentation in children is only one half as severe as in adults.

The common potential causes of urinary obstruction and, by the same token, the common predisposing causes of urinary obstruction, are a congenitally tight preputial orifice and stricture of a renal calix. Between these anatomic extremes one or more of a legion of uro-obstructive conditions may exist.

Many boys, thought to have chronic pyelitis, have been observed in whom the pyuria was caused by a tight prepuce, and they were cured by a simple surgical procedure. Many times the simple passage of a ureteral catheter or a urethral dilator is all that is necessary to eliminate a chronic urinary infection of long standing. In other instances, a plastic operation on the pelvis of the kidney may be necessary to correct a congenital anomaly. But all of these procedures, if performed early enough, will result in the conservation of renal tissue and eliminate the disabilities associated with chronic infection that might well be a handicap throughout life.

DR. QUILLIAN (concluding): I wish to thank Dr. Holloway and Dr. Orr for their discussion of this paper and this subject.

I merely wanted to bring out and emphasize that pyuria is frequently encountered in medical practice, that obstruction, congenital anomalies and loss of function associated with infection demand careful study, and that the procedures to which attention has been directed can best be carried out if the pediatrician and general practitioner work in collaboration with a competent urologist.

MODERN DIAGNOSTIC PROCEDURES IN SYPHILIS

L. C. GONZALEZ, M.D.

TAMPA

With the rapid advances which have been made in medicine in the last few years, the practicing physician must keep constantly abreast of progress in order to practice his profession more efficiently. In some instances this progress has been so great that it has been necessary to discard completely the technics learned in medical school. On the surface, the diagnosis and treatment of syphilis have remained comparatively static, for the condition has been gaged, not as disease, but as a blood test requiring a standard number of treatments with specific drugs. Despite the fact that syphilis has always been classified as the "great imitator," the majority of medical schools have contented themselves with pigeonholing the disease into the different specialties taught, thus demonstrating it in individual parts rather than in its whole. Consequently, according to the emphasis placed by his school, the medical graduate knew that syphilis produced a positive serologic reaction, that it required so many shots of specific drugs to "cure" it and that this protean disease could manifest itself in many ways; always, however, there was emphasis on the dermatologic aspect. This attitude is well reflected in the organization of the specialty board of Dermatology and Syphilology, inferring thereby that syphilis is predominantly skin-deep. Nothing could be further from the truth. Although syphilis may present obvious dermatologic manifestations, it is a disease of the whole body system, which in itself implies a fairly wide acquaintance with general medicine. This observation is not intended to imply that practice of a specialty bars its practitioners from a thorough knowledge of syphilis. Among the outstanding syphilologists are physicians who are specialists in other fields of medicine.

It is appropriate at this time, when the nation has become syphilis conscious to review modern procedures of diagnosis relating to syphilis.

Read before the Sixty-Ninth Annual Meeting of the Florida Medical Association, held in Hollywood, Apr. 13, 14 and 15, 1942.

HISTORY

It is common experience that a history of infection with syphilis is hard to obtain. Of patients with proved late syphilis of various types, at least one half of the women and one third of the men give no history of early symptoms. As Stokes put it, this lack of information may mean that there were actually no early lesions, that the lesions were not visible, that the patient had lesions of such mild character that he dismissed them as of no importance, or that he actually had forgotten them. It may also mean that in eliciting a history, the questions were asked in an unfamiliar manner or in tones implying that infection is inconceivable, or finally it may mean that the patient was not asked about antisyphilitic treatment.

It is possible that without actual direct information from the patient, the physician can obtain collateral information that will enable him to trace the disease. Previous history of gonorrhea, promiscuity of sexual habits possibly with names of contacts, status of the spouse's health, pregnancies and miscarriages, is of value in many instances in establishing the evidence or time of infection.

PHYSICAL EXAMINATION

Too often the physical examination for syphilis has degenerated to the single procedure of venipuncture. While the serologic test has raised the efficiency of diagnosis to a great degree, the physician must realize that syphilis will never wholly yield to a single diagnostic attack.

As in the examination for other general infections, a complete physical examination is essential. One must not be satisfied with a superficial examination, but special attention must be devoted to the organs and tissues which syphilis commonly affects. Thus, no examination for syphilis is complete without a thorough dermatologic, cardiovascular and neurologic examination, including the use of the ophthalmoscope. It is under careful observation that evidences of the disease are brought to light. Such commonly unnoticed signs as mucous patches, perforated septum, pupils not reacting to light and periosteal tenderness would go undetected in an average cursory examination.

It is a common practice quickly to dismiss a genital lesion as syphilitic on the basis of its appearance and location. There is no trustworthy clinical method by which an early lesion of syphilis can be diagnosed except through the application of properly performed darkfield tests. Unfortunately, the darkfield examination is not as commonly used as it should be. Failure to use this diagnostic aid is due, no doubt, to a lack of equipment with which to perform the test. In order to overcome this handicap, the State Board of Health has provided, for the last year, through its central and branch laboratories, delayed darkfield service.

INTERPRETATION OF LABORATORY TESTS

One is prone to rely entirely on serologic examinations for the diagnosis of syphilis. In many instances there is no attempt to make a clinical diagnosis of the disease for the serologic report is accepted as the magic key that unlocks the door to medical recognition of the case. It cannot be emphasized too strongly that a serologic examination is a laboratory procedure to aid the physician in making a diagnosis, that it represents the result of a nonspecific test applied to a specimen of blood by a laboratory technician and that it is in no way intended to make a diagnosis. It is admitted that in certain patients the physician has nothing to depend on except the serologic report on his desk. His reaction, therefore, is to accept this report without further questioning or hesitation. Herein may lie a pitfall. Despite constant improvements in serologic technic and despite modifications raising the sensitivity and specificity of serologic tests, the inescapable fact remains that all serologic tests are not specific in the true sense of the word. The degree of accuracy of the results of a serologic examination depends on many factors. These include the type of test selected by the laboratory, the adherence of the laboratory personnel to the technic designated by the originator of the test used and the presence in the patient's blood of certain reagin-like substance of a biologic nature, which may produce false positive reactions. It goes without saying that a diagnosis of syphilis should never be made on the single evidence of one positive serologic report. The physician must, therefore, be prepared beforehand to know how reliable is the laboratory to which he sends his specimens. He must know what factors may produce false positive tests and what clinical evidence he has accumulated before he can intelligently interpret the serologic report, whether negative, doubtful, or positive. To illustrate these points specifically, a negative reaction may

be obtained in a syphilitic patient who has had previous treatment, but who shows clinical evidence of syphilis; or a negative reaction may occur in the case of a syphilitic person who has had no treatment. In the former case treatment may have subdued sufficiently laboratory evidence of the disease; in the latter case the patient may not have had sufficient reagin in the blood to permit detection of the disease, or the sensitivity of the laboratory test, as performed, was not sufficiently high to reveal it. A doubtful reaction may also be obtained in a syphilitic patient for the reasons mentioned, or a doubtful or positive reaction may occur in a nonsyphilitic person. In the latter case, when the reliability of the laboratory or laboratories is unquestioned, other factors may be responsible for these false reports. According to Brunet and Salberg, in the best conducted laboratories with whatever test employed, the technically false positive serologic reactions in normal persons will average from 1 to 2 per cent. There is reason to believe that biologically false positive tests occur in 1 or 2 normal persons in every 1,000 examined.

Disease conditions can also produce a false positive reaction. Physicians are all aware of the fact that malaria produces false positive reactions. So many other diseases have, in addition, been incriminated that in a recent editorial of the Annals of Internal Medicine a list of them was given. They include yaws, leprosy, malaria and infectious mononucleosis. Other diseases which have been reported to give false positive tests are relapsing fever, rat bite fever, scarlet fever, tuberculosis, pneumonia, Vincent's infection, malignant disease, subacute bacterial endocarditis, glanders, Weil's disease, venereal lymphogranuloma, chancroid, trypanosomiasis, typhus fever, vaccinia, infections of the upper part of the respiratory tract, rheumatic fever and injections of horse serum. Since malaria is one of the most prevalent diseases in Florida, it is important to give careful thought to this possibility in evaluating serologic reports.

A further clarification of the serologic report may be obtained by the use of serologic quantitativeness. Whereas the routine serologic test is of a qualitative nature in that it reveals the presence of a specific substance found in syphilitic blood known as reagin in sufficient amount to give a positive or doubtful reaction, the quantitative test measures the amount of reagin content in units. In general there are great variations in reagin content or titer, varying from 0 to 1,600 units observed in all types of clinical involvement, including early and late syphilis. On the average, however, the reagin titer is higher in early syphilis (100 or more units) than in any form of late syphilis (20 to 50 units). A single quantitative report is of no great significance, except in young persons who, if infected with syphilis, have acquired the disease recently and are expected to give a higher titer. To be of diagnostic value, a series of quantitative tests at weekly or semiweekly intervals is necessary in order to establish a trend. Thus, if the positive reaction is false, it tends to decrease in titer and finally to disappear. On the other hand, if the positive reaction is due to syphilis, the titer may increase or remain at the same level. Quantitative tests are of particular value in establishing a diagnosis of congenital syphilis in the absence of clinical signs.

Despite technical progress in serology, one must recognize that the diagnosis of syphilis cannot depend entirely on the laboratory findings. The individual patient as well as the disease must be evaluated as a whole.

SPINAL FLUID EXAMINATION

No examination for syphilis is complete without an examination of the spinal fluid. The truth of this statement is borne out by the countless number of asymptomatic neurosyphilitic patients who are routinely treated and in whom the disease is unrecognized until clinical manifestations develop. If the physician is effectively to reduce the incidence of syphilitic involvement of the central nervous system and if he is to cut down on the admissions of paretic patients to state mental hospitals, he must be prepared beforehand to recognize cases of this type and institute appropriate therapy before clinical manifestations develop. Asymptomatic neurosyphilitic patients need more attention. Every one of them becomes a likely candidate for the numerous crippling manifestations of neurosyphilis, with its attending disastrous results to the patient and to his family. The regrettable fact remains that a proper survey of the spinal fluid at the time of examination would have warned the physician of future danger and, with the institution of appropriate measures, would have prevented serious consequences. It is evident, therefore, that an examination of the spinal fluid is as important as a serologic examination and should be

routinely applied in those cases in which the patient has, or is suspected of having, syphilis.

THE DIAGNOSIS OF CONGENITAL SYPHILIS

One of the phases of the diagnosis of syphilis which needs more careful attention is the diagnosis of congenital syphilis. In my opinion, the classifying of a newborn baby as congenitally syphilitic, based solely on one or two routine blood tests is a gross injustice to the future welfare of the child, unless the diagnosis is supported by further evidences. It is a diagnosis which requires serious consideration, for once it is made and treatment is instituted, the patient will be classified as congenitally syphilitic for the rest of his life with virtually no chance to disprove the diagnosis, if he actually were not syphilitic, by virtue of the fact that treatment had been instituted.

Black, in an excellent paper presenting this subject, observed: "It is certainly not malpractice to insist upon a positive diagnosis before undertaking the treatment of syphilis. Indeed, one of the important axioms of the proper management of this disease is that the diagnosis must be established before treatment is instituted." It is obvious, therefore, that more than a routine serologic examination is necessary to establish the diagnosis of syphilis in newborn babies when clinical signs are absent. Black suggested the following procedures:

1. Routine serologic test, history (with syphilis in mind) and careful physical examination (with syphilis in mind) of all pregnant women at the time pregnancy is diagnosed. Frequent check-up of suspicious cases.

2. Suitable treatment of every pregnant woman who has or has had syphilis, regardless of the results of the serologic tests, physical signs of the disease, or previous treatment.

3. Darkfield examination of umbilical vein scraping in every case in which there has been inadequate, irregular, or no antepartum treatment.

4. Serologic test of cord or peripheral infant blood in every case and titration in all cases in which there is a positive reaction. Without this original test, with titration when the reaction is positive, it is impossible to evaluate properly the next test.

5. Roentgenograms of the long bones within two weeks after birth of those infants in whom the presence of syphilis is fairly probable (inadequate, irregular or no antepartum treatment), or in whom the first serologic reaction was positive.

6. Repeated serologic tests of infant blood at no longer than two week intervals with titration in cases in which the original test gave positive results.

7. Repeated roentgenograms at one month or six weeks of age in cases in which the diagnosis is still doubtful.

8. Repeated darkfield examinations of suspicious lesions, for example, lesions of the mucous membranes of the nose, mouth, or anus, diaper rash and a slowly healing umbilical stump.

9. Examinations of the spinal fluid of infants in whom the presence of syphilis is fairly probable when subsequent examinations have not revealed positive diagnostic results.

It may not be possible or necessary to carry out all the procedures mentioned, but it is expedient to withhold treatment until a definite diagnosis is made. In the majority of cases support for the diagnosis will depend on repeated quantitative serologic tests and roentgen examination of the bones, when it is recommended that infants be subjected to serologic tests at weekly intervals for the first three months and at monthly intervals thereafter up to one year.

CLASSIFICATION OF SYPHILIS

Once the diagnosis of syphilis is established, the problem is not entirely solved. In order to institute appropriate therapy, it is essential to classify the stage of the disease. The rationale of this procedure is evident when one considers that clinical manifestations of syphilis are as numerous and divergent as the persons who acquire it.

The old clinical classification of primary, secondary and tertiary syphilis has given way in the light of more clinical experience to the newer classification which recognizes time element, clinical activity and inactivity, and potential infectiousness. This classification is as follows:

1. Early syphilis
   a. Primary and secondary
   b. Latent syphilis, arbitrarily set as syphilis of less than four years' duration; no clinical evidence of activity; positive serologic reactions only; potentially infectious.
   c. Asymptomatic syphilitic disease of the central nervous system; no clinical evidence; serologic tests of the spinal fluid with positive results.
2. Late latent syphilis, arbitrarily set as syphilis of more than four years' duration; no clinical evidence of activity; positive blood serologic reaction only; potentially less infectious.
3. Late syphilis, showing late clinical manifestations, classified according to the type of manifestation,

as, for example, cardiovascular, osseous, visceral and that of the central nervous system (parenchymatous and meningovascular, excepting asymptomatic neurosyphilitic disease, which can be detected early).

4. Congenital syphilis, or syphilis acquired in utero.

It can readily be appreciated that more than a routine blood test is needed to arrive correctly at a diagnosis of syphilis. In many cases, the serologic change of the blood is the only evidence present, but when all the measures have been applied, it is comforting to know that the investigation was complete. It is to the physician's advantage that complete examination be made, for when other signs are noted and their significance appreciated, appropriate therapy to fit the case may save wasteful routine therapy and serious embarrassment.

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DISCUSSION

DR. WILEY M. SAMS, Miami: I wish to commend Dr. Gonzalez upon his interpretation of this subject. I believe he has made an excellent presentation, and I hope that every physician in the state will have the opportunity of reading this paper carefully when it is published in the Journal. It carries a great deal of valuable information. The emphasis upon a complete examination of the syphilitic patient, with careful attention to the cardiac status and an adequate examination of the central nervous system, is well taken.

I am not here to defend the dermatologist. I am not here to claim that all dermatologists are syphilologists, but I will admit that there was a time when I thought they were. On my first visit to Florida, I carried a letter of introduction to Dr. Kirby-Smith of Jacksonville. I had a pleasant visit in his office, and he gave me some reprints, which I read while coming down to Miami. The title of one paper was, "Are We Dermatologists Syphilologists?" I pondered that question for a while, and then I put it in reverse and thought of it again. As I read it over carefully, I discovered that Dr. Kirby-Smith did not believe he was a syphilologist, nor did he believe that dermatologists were necessarily syphilologists. The school in which I had my training thought otherwise. Its students began with syphilology, and a great deal of dermatology was left for us to cultivate for ourselves in private practice. I began to wonder why dermatology and syphilology had been grouped together, and I found the answer to this question in reviewing the history of syphilis. There was a time, not so long ago, when the diagnosis of syphilis was made entirely upon its clinical manifestations. The only manifestations then definitely recognized as syphilitic were those which occurred upon the skin as a secondary eruption, or those lesions which occurred on the penis.

Some syphilologists, even at that time, before the development of serologic tests or the discovery of the organism causing the disease, had developed theories concerning the effect of syphilis upon the central nervous system, its manifestation, for example, as tabes. It had also been suggested that syphilis caused certain cardiac conditions, but no definite proof was available. Rapid advances were made in the understanding of the disease and its diagnosis only with the introduction of the Wassermann test, and in its treatment only after the introduction of arsphenamine, about 1910. It is still the practice of European dermatologists to treat all venereal diseases, including gonorrhea, and this practice is largely followed in South American countries. In the United States, the gonorrhea problem in men is left to the urologist, while the knowledge pertaining to syphilis has been taught and the disease has been treated in most medical centers by the department of dermatology. Some schools have done an excellent job of teaching syphilology in its broadest sense; others have, to a large extent, neglected the problem. How it is handled apparently depends largely upon the individual viewpoint of the professor in charge of the various schools.

The development in recent years of laboratory tests for syphilis and easy methods of treatment, such as the introduction of neoarsphenamine, has made the routine diagnosis and treatment available to all physicians. The general practitioner should familiarize himself with the important factors in the control and management of syphilis. The same process of evolution is now distributing the gonorrhea problem back into the hands of the general practitioner for similar reasons, that is, easier methods of diagnosis and more convenient and satisfactory forms of treatment. The average physician was more than willing to have the urologist treat gonorrhea, including all of its complications, which were of sufficiently frequent occurrence before the introduction of the sulfonamide drugs. The present trend, however, closely resembles that which took place in the field of syphilis some twenty years ago, namely, a dissemination of methods of diagnosis and treatment to all practitioners. This, I believe, is in the long run desirable, for certainly the specialists in the past have not been adequate in number to deal with a problem of such magnitude. The very fact that the incidence of the disease has not greatly decreased can only indicate that the approach to the problem has been inadequate. A more widespread dissemination of knowledge to all members of the profession is highly desirable. I believe one can define a specialist as a physician who devotes his time, primarily, to a definite field of work. He may, however, be a syphilologist, if he is interested in the subject and willing to work to master the problem, regardless of what his specialty may be. The diagnosis and management of syphilis, in all of its phases, is a problem broad enough to be of interest to any physician, regardless of the type of work in which he is engaged.

Dr. Gonzalez's review of the diagnosis of congenital syphilis is most timely. More chances for error in diagnosis exist in this problem, as it concerns the newborn, than at almost any other point in the field of syphilology. Roentgen examination of the long bones in infants is highly desirable and frequently yields diagnostic information. Transverse lines of density at the epiphyses may be caused by bismuth which is administered to the mother during pregnancy. These should not be interpreted as evidence of congenital syphilis.

In the relation of syphilis to the war effort, I believe the syphilologist has a considerable contribution to offer. The nation is now in the process of seeking all of the man power which can be obtained, and the problem of syphilis is being handled in a way to detract from this goal. A great many industrial companies and insurance companies now require a blood test before hiring a person.

If the serologic tests give positive results, he is, in most cases, rejected. Both the Army and Navy reject men with positive serologic reactions. The problem of the proper placement and management of the patient with latent syphilis, who has a persistently positive serologic reaction in spite of adequate treatment, must be settled on some rational basis. When one considers the fact that in approximately 5 per cent of all candidates who were examined for the draft the serologic test gave positive results, it appears that the problem is one of some magnitude. Many of these patients have had adequate treatment over a long period of time. Many of them do not need additional treatment, and in still others negative results of the serologic test will never be obtained, regardless of the amount or type of treatment given with the methods now at hand. The men comprising a considerable proportion of this group with positive serologic reactions are not incapacitated in any way; they are physically able to perform needed work and to serve in the armed forces if they are needed. Adequate examination, including roentgen studies, tests of the spinal fluid and other investigation as indicated, will, I believe, demonstrate that a large number of the patients with a fixed positive serologic reaction are in good physical health and should be given the same consideration as is shown other prospective employees, and certainly they should not be stigmatized simply because they are unfortunate enough to have a fixed positive serologic reaction. A more liberal interpretation of this problem should be made.

DR. JAMES N. PATTERSON, Jacksonville: As Dr. Gonzalez pointed out, syphilis is too often considered a blood test giving positive results with a series of "shots" required to cure the serologic reaction. Unfortunately, this is seldom the case. There are two important fallacies in such an assumption. First, never should the result of a single blood test alone be considered as diagnostic. Second, syphilis many times cannot be treated successfully on an empirical basis. Biologically false positive reactions occur frequently and they definitely are not the fault of the laboratory worker. When my associates and I have reason to suspect a biologically false positive reaction, we subject the serum to intensive study and send a portion of it to other laboratories for diagnosis. We send part of the serum to Dr. R. L. Kahn for his verification test by which he believes he can differentiate between the biologically false positive and true positive reaction. Then occasionally, we also send specimens to Dr. Eagle's laboratory at Johns Hopkins University, or to the United States Public Health Service Venereal Disease Research Laboratory at Staten Island. Of course there is no charge to the physician for any of these services.

False positive reactions due to technical errors can be eliminated, in large part, by careful laboratory work and by the use of two serodiagnostic tests. We apply both the Eagle macroflocculation and Kahn standard tests to all specimens for which sufficient serum is received.

Dr. Gonzalez's remarks regarding the examination of spinal fluid cannot be too strongly emphasized. We join with him in urging that specimens of spinal fluid be submitted for examination in all cases, especially when syphilis of the central nervous system is suspected and before release of any patient as clinically cured.

The essayist mentioned that our laboratories perform delayed darkfield examinations. In addition, direct darkfield examinations are available in all localities where we maintain a laboratory. In these areas the physician can send his men, but not his women, patients to the laboratory where one of our workers will obtain the specimen and examine the fluid.

It is my opinion that Dr. Gonzalez, in his paper, has made a valuable contribution to the knowledge of the proper methods to employ in the diagnosis of syphilis.

DR. GONZALEZ (concluding): In the present emergency as all realize and with the many sufferers from syphilis in this nation, it behooves every physician to check in his mind the diagnostic procedures that aid in the diagnosis of syphilis. I did not attempt to present anything new, but rather to review facts that are more or less the A B C's of syphilis. My primary purpose was to call the physician's attention to the fact that syphilis is a disease and not a blood test.

I also want to thank the discussors for the valuable presentations which they contributed to my original effort.

THE PREOPERATIVE AND POSTOPERATIVE MANAGEMENT OF HYPERTROPHIC PYLORIC STENOSIS: A REVIEW OF FORTY CASES

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In the past twenty-five years a quantity of material has appeared in the literature regarding the treatment and subsequent course of cases of hypertrophic pyloric stenosis in children. The great majority of these studies have originated in the European clinics, especially those of Denmark, Holland and Sweden, and have dealt with patients treated with the strict medical regime to which the continental clinicians subscribe. Physicians in the United States have generally adopted the view that the only satisfactory treatment for this condition, once it is diagnosed, is some modification of the Fredet-Rammstedt pylorotomy. Strangely, to date there has appeared in the literature little or nothing in the nature of a follow-up study on a series of cases treated in this manner. It is my purpose in presenting this paper to deal not only with the preoperative and postoperative management of pyloric stenosis, but to present a series of cases in which both preoperative and postoperative roentgen studies have been made.

I shall not dwell on the causes and symptoms of pyloric stenosis, but suffice it to state that although several theories exist as to the etiologic agent or agents, none is definitely proved. Once the diagnosis is made, one realizes that he is dealing with a true pathologic state and that rational prompt treatment is necessary to accomplish the best ultimate results, namely, complete alleviation of the condition.

At the present time it is true that physicians do not see the extremely dehydrated and emaciated infant suffering from pyloric stenosis that they saw years ago. The reason is that they are more often cognizant of the existence of the condition and prone to institute adequate supportive measures at the onset of the symptoms. This fact alone has lessened the mortality. The second

factor which has reduced the mortality is improved and rapid surgical technic, and the third is the realization that an adequate dietary regimen is essential to a good prognosis.

Once the diagnosis of pyloric stenosis has been established, the subsequent course lies within two alternatives. The first one is that of immediate surgical intervention, and the second consists of a brief period of gradual adequate hydration followed by an operation. The first course is applicable only in cases in which the diagnosis is established without question and the infant is in the best possible condition. Even these cases would be well managed with a brief period of general preparation. The second course of management, and the one which I have generally followed in this series of cases may be briefly outlined as follows:

1. Institution of a regimen of thick cereal feedings at three or four hour intervals. The formula I use is:

Farina	80.0
Milk	600.0
Water	200.0
Dextrimaltose	60.0
Lactic acid (USP)	2.5

This formula has a value of approximately 40 calories per ounce. From 2 to 3 ounces is given at each feeding, depending on the relative size of the infant.

2. Administration of sedatives and antispasmodics at controlled intervals. It is my belief that treatment with elixir of luminal, ½ to 4 cc. every four hours, and 1 to 6 drops of a 1 to 2,000 solution of atropine sulfate fifteen minutes before feedings, depending on the individual infant, is most desirable. If simple pylorospasm is the offender, this regime will usually alleviate the symptoms.

3. Adequate parenteral administration of fluids to combat dehydration. One hundred cubic centimeters per kilogram of body weight per day will provide adequate hydration in children with this disease.

4. One or 2 small blood transfusions will be of benefit in the preoperative period and will hasten convalescence.

5. A minor preoperative procedure which has proved extremely valuable in my experience is gastric lavage immediately preceding surgical intervention. My method has been to use normal saline and gavage by way of a nasal catheter until the fluid returns clear. This measure decreases postoperative emesis.

Quite as important as the foregoing is rapid and adequate surgical intervention. It is necessary that every fiber of the pyloric tumor be severed, or symptoms will recur after varying intervals.

The choice of the type of anesthesia rests largely with the surgeon, but naturally is dependent on the general condition of the child. Many excellent clinicians advocate local anesthesia, and there is no adequate objection to this procedure. It has been my practice to administer drop ether in the majority of cases, and thus far I have noted no ill effects.

In recent months considerable controversy has arisen regarding the postoperative management of pyloric stenosis. Some authors advocate the institution of feedings within one or two hours following the operation, and others advocate a delay in feeding of from six to twenty-four hours. Last year Faber and Davis presented some excellent data along these lines. They made roentgen studies, using barium feedings, on infants for periods varying from a few hours to several days postoperatively, and their observations were conclusive. Gastric motility is inhibited in all cases for from six to twenty-four hours and in some instances as long as seventy-two hours. At the same time intestinal peristalsis is inhibited from ten to eighteen hours. From this study one might deduce that feeding immediately following the operation will induce emesis, as it often does, and that it is optimum to wait from twelve to eighteen hours before administering anything by mouth. In either event it is agreed that feedings should begin with very small quantities and gradually be increased in strength and volume until a normal dietary regimen is again in progress. My postoperative regime at this time calls for no feeding for from six to eight hours following the operation and then the giving of from 5 to 10 cc. of distilled water every two hours for 2 or 3 feedings. The feeding is then changed, if no vomiting has occurred, to 15 to 20 cc. of 5 per cent dextrose in distilled water every two hours for the next four hours. At this time half strength dryco, or 1 part of evaporated milk and 2 parts of water, is substituted in amounts up to 30 cc. Depending on the general reaction of the infant, this is gradually increased in amount and strength until 2 parts of evaporated milk and 3 parts of water, or full strength dryco is being administered every four hours. The caloric intake is improved by

the addition of carbohydrate up to 5 per cent after the second postoperative day. It is well to remember that children of this age group require approximately 100 calories per day per kilogram of body weight, and feedings must reach this optimum as soon as practically possible.

In spite of all measures taken to prevent postoperative emesis this unpleasant sequela will occur in a few cases. Experience has shown that the best remedy is to resume thick cereal feedings for from several days to several weeks depending on the individual patient.

Adequate sedation is paramount as a postoperative measure. This does not require that one render the child somnolent, but he should be kept in a state that will prevent continuous crying or fretfulness because of pain following the operation. Again the simplest way to accomplish this end is by administering 4 to 8 cc. of elixir of luminal at intervals varying from four to six hours for the first two or three days.

Small blood transfusions are a useful procedure, especially when the patient is vomiting or generally below par. In no instance should it be necessary to give over 10 or 15 cc. of whole blood per kilogram of body weight.

Perhaps the most frequent complication one meets in the postoperative management of pyloric stenosis is diarrhea. This is usually of an idiopathic nature and generally responds well to a brief period of starvation, six to twelve hours, followed by feedings high in protein. In some cases the use of pectin products may be necessary to control the diarrhea, but the need for them is unusual.

Finally, but by no means least important, is the fact that throughout the postoperative course adequate intake of fluids must be assured. When this is not accomplished by mouth, subcutaneous administration of saline or 5 per cent dextrose in saline or distilled water is advised to correct the deficit.

In a series of 40 cases which I reviewed for this study several interesting observations were brought forth. There is a definite seasonal occurrence of hypertrophic pyloric stenosis in the second quarter of the year. Roughly, one third of the cases in this series were studied by roentgen examination preoperatively and two thirds postoperatively, either immediately or as a follow-up procedure. The preoperative studies were accomplished by administering barium mixture from a nursing bottle and then observing the passage of the meal by fluoroscopy. In frank cases of hypertrophic pyloric stenosis the peristaltic waves are visualized coming down to and reaching the pylorus and then ceasing abruptly with an accompanying bulge, which is sharply defined, at the point of cessation. In these cases the pyloric canal is extremely narrow and in some instances permits the least trickle of barium to pass through to the duodenum. A great degree of gastric retention is a constant occurrence. In a period of a few weeks postoperatively in the great majority of these cases a widening of the pyloric canal is evidenced by the passage of barium and the disappearance of the enlargement and bulging in the region of the pyloric antrum.

In the series of cases presented there was a 3 to 1 ratio of boys to girls, whereas in most textbooks the ratio is given as about 10 to 1. Forty-eight per cent of all cases were in first-born children; this percentage is a constant finding in all series discussed in the current literature. The age of the patients at the time of the onset of symptoms averaged eighteen days; the youngest patient was seven days old and the oldest forty-five days. In 89 per cent of the cases peristaltic waves were visible, and in 69 per cent a tumor was palpable in the upper right quadrant of the abdomen at the time of examination. In all cases in which the patient was operated upon the formula changes averaged only two per patient. One patient was discharged on the eighth postoperative day, but the average period of hospitalization was seventeen days. In 20 per cent of the cases vomiting did not occur postoperatively, in 65 per cent there was evidence of slight emesis for three or four days, and in only 15 per cent was vomiting a major postoperative complication. Other complications included pneumonia in 1 case, infection of the upper part of the respiratory tract in 4 cases and attacks of diarrhea in 7 cases. I might mention here that I am justly proud of the fact that not a single fatality from hypertrophic pyloric stenosis has occurred in the past ten years in the cases that have come under my care.

In following up these cases it was my good fortune to contact 25 patients previously operated on and to repeat fluoroscopic and roentgen studies. The period of time since these children were operated on varied from two months to eight years. Seven of the patients manifested recurrence of symptoms to a varying degree. Two

experienced attacks of emesis, abdominal pain and constipation at intervals of from six to ten weeks; at last examination delayed emptying of the stomach and a narrowed pyloric canal were noted in these cases. In the other 5 cases there occurred vague abdominal pain and a mild degree of constipation, but no definite evidence of pathologic changes in the region of the pylorus was demonstrable. The other children studied remained entirely symptom-free, and no pathologic evidence was demonstrable.

SUMMARY

In conclusion, it is my opinion that roentgen examination is a material but not an essential aid in the accurate diagnosis of hypertrophic pyloric stenosis. The treatment of the condition, once the diagnosis is made, resolves itself into a regime of excellent preoperative preparation by adequate administration of fluids, sedation and small blood transfusions, followed by rapid and complete surgical measures and postoperatively by a logical and adequate caloric intake of feedings. Treatment of this nature should insure almost 100 per cent cure and rapid convalescence.

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GLOMUS TUMOR

REPORT OF A CASE

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It is now about twenty years since Masson,[1] using Barré's cases, described the entity of the glomus as well as its tumor formation. About one and one-half years ago I was able to compile from the literature reports of 144 cases of glomus tumor. Many more have since been reported.

Cases nevertheless continue in some instances to remain undiagnosed for a long time. The reason is that the general practitioner does not think of this disease, or is unacquainted with the syndrome of the tumor. Undiagnosed cases cause a great deal of misery to the patient. It is one of the most remarkable features of surgery that a very minor operation can and does relieve untold agony.

The history of the case herein presented illustrates these points and is perhaps more interesting as related by the patient:

For the past fourteen years my life has been controlled, regulated and dominated by my finger. My personal life, my social life and my professional life were completely under its domination. Fifteen years ago a portable sewing machine fell on the ring finger of my right hand. I was and still am a school teacher. I remained away from school for several days. Six months later I began to experience pain in my right arm, which was diagnosed as "rheumatic." The pain became aggravated with the passing of the years. My finger became very sensitive to cold and dampness. I was able to foretell weather conditions much better than the weather bureau. In the winter time in order to go outside, I put on fur-lined gloves and wore a furred muff. My husband kept the motor of the car running for sometime before, in order to heat the car. I rushed out from my house over the sidewalk to the automobile. Even this short exposure was sufficient to give me agony. The slightest jar of this nail produced agonizing pain which reached up to my neck. This tumor was a true "trigger zone." If for any reason my hand was exposed to cold, be it ever so slight, it took some time for this hand to become warm, but the finger remained cold for an hour. When my hand became cold, the pain radiated to my heart over my forearm, arm, shoulder and chest. This pain also involved the neck. A slight discoloration under the nail became visible about five years ago. I visited several orthopedic surgeons, who told me I was suffering from spondylitis and advised me to be placed in a plaster cast or receive peripheral injections of the nerves.

This case of glomus tumor is reported because of its typical history and symptoms. It is interesting to note that the history is similar to that of the first case ever described. Barré[2] reported this case before the Congress of Neurology at Strasbourg in 1920.

The history of his case, translated almost literally from Barré's report, follows:

From the service of Dr. Martin J. Loeb at Bronx Hospital.

The cover of a school desk fell on the middle finger of the left hand of a 13 year old girl. A painful hematoma appeared under the nail. Five weeks later it disappeared, and the pain subsided. After a few weeks, however, severe pain began to manifest itself again, first in the finger and finally involving the entire extremity. The temperature of the affected side was elevated in comparison with that of the opposite side. There was slight atrophy of the affected side. The symptoms lasted five years. Resection of the lateral nerves gave no relief. The nail was then incised, and a small tumor was removed, after which the girl was rapidly cured.

In a previous paper [3] I analyzed 144 reported cases of glomus tumor and their relationship to injury. The percentage of these cases in which injury was a causative factor is, I believe, much lower than actually was the case. Of 144 cases, in 31 there was a history of injury. The reason for this low percentage is the lapse of time between the injury, the appearance of symptoms and the occurrence of the tumor.

The glomus is a thermoregulatory organ located in any part of the skin, particularly in the hands and feet and under the nails. The normal glomus is a shunt between the arterial system and the capillary arterial system from which efferent veins emerge.[4] It is a neuromuscular-arterial organ and is controlled by the sympathetic nervous system. The dilatation and contraction of the arterial system in the glomus is controlled by a nervous mechanism.

Masson[1] was the first to describe the anatomy of the glomus and the glomus tumor. It is for this reason that the tumor is sometimes referred to as the arterial angioneuromyoma of Masson. Popoff[5] credited Hoyer[5] with being the father of the anatomic conception of the glomus. Sucquet[5] preceded Hoyer[5] with the description of ordinary capillaries which open directly into a neighboring vein without forming a venous capillary network. For a description of the glomus the reader is referred to Popoff's excellent paper. The tumor of this neuromuscular-arterial organ has been well described by Stout.[6] The characteristic feature, according to this author, is that the endothelial lining of the vessels is supported by a fine fibrous network and the rest of the wall is made up of peculiar cuboid or rounded "glomus" cells, the epithelioid cells of Masson, and smooth muscle well differentiated, or in an embryonal form in which the smooth muscle fibers occur within the cytoplasm of the epithelioid cells. Myelinated nerves and nonmyelinated nerves are present near or beneath the capsule of the tumor.

REPORT OF CASE

Mrs. P. F., a school teacher aged 45, was admitted to the hospital on July 21, 1941. The history of her case as related by the patient, was given in a foregoing paragraph.

Physical examination revealed under the right index fingernail an irregular grayish purple mass about 15 mm. in length by about 5 to 3 mm. in width from above downward. This mass was irregular in shape and was constricted at the center, giving a bottle-neck appearance. This glomus tumor was much larger than is usually the case.

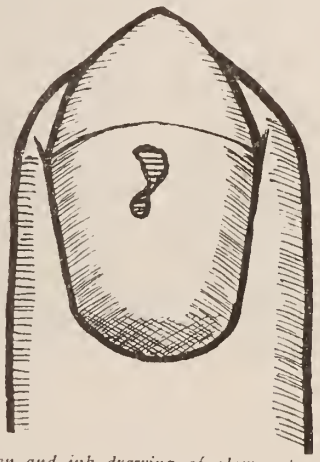


Fig. 1. Pen and ink drawing of glomus tumor under the nail. The tumor did not lend itself to a color photograph.

The skin temperature reading at the usual hospital room temperature was normal. One must remember this reading was done on July 22. It would have been interesting to take a temperature reading of the hand after exposure to cold. Unfortunately this was not done.

Roentgen examination of the right ring finger showed no abnormality. A preoperative diagnosis of glomus tumor under the nail of the right ring finger was made.

At operation on the following day the tumor was located about 2 to 3 mm. below the distal junction of the nail with the nail bed. The size of the tumor was 5 to 3 mm. in width from above downward and about 15 mm. in length. Under local anesthesia the nail was removed from the bed, and the tumor and its surrounding tissue were excised to the bone. The bed was cauterized with carbolic acid and alcohol.

The pathologic report, made by Dr. Joseph Felsen, is as follows:

Specimen consists of a 1 x 0.5 cm. portion of whitish tissue which presents on one surface a 5 x 2 cm. yellowish-brown area. The other surface is granular in appearance. (The dis-

Skin Temperature Reading

	Right Hand					Left Hand				
	Thumb	2	3	4	5	Thumb	2	3	4	5
Dorsum of finger at nail bed	31.1	31.1	31.5	31.0	30.7	31.1	31.4	31.2	31.1	31.0
Distal tip of finger	30.3	30.1	30.1	29.5	29.7	30.4	30.6	30.6	30.2	30.5

crepancy between the preoperative measurements and the measurements made in the laboratory is due to the shrinkage of the tissues.)

Section reveals skin and subcutaneous tissue. In the latter is seen a well demarcated cellular area which has three essential elements: (1) closely applied masses of epithelial-like cells with indistinct cell borders, (2) interspersed thin-walled channels lined by endothelium and (3) areas of looser fibrillar tissue suggesting non-medulated nerve fibers. The nuclei are most prominent and are elongated and narrow. The general appearance is that of an angioneuromyoma or so-called glomus tumor.

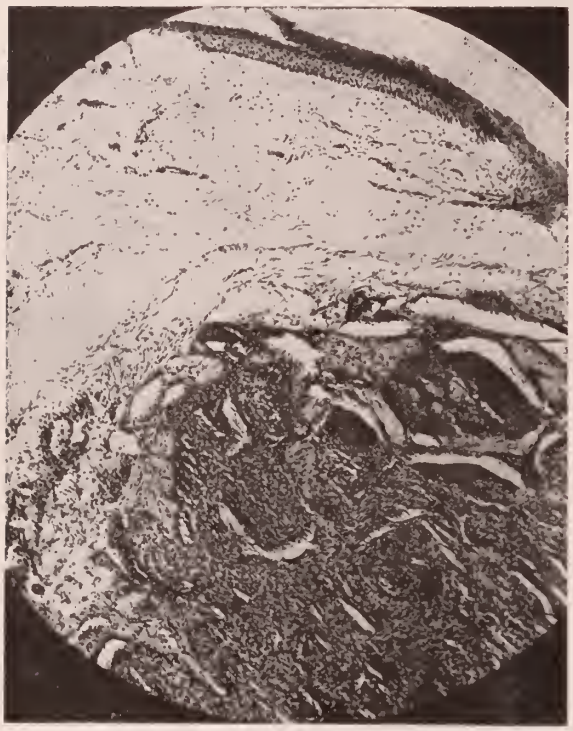


Fig. 2. Microscopic section of glomus tumor.

About two to three months after the operation the fingernail grew back covering the denuded area. The patient feels perfectly well and complains neither of pain nor radiation of pain. Change of weather and cold do not affect her at all. The "trigger zone" character of the nail, which responded with excruciating pain to the slightest jar, has completely disappeared.

CONCLUSION

1. This case is reported because of its characteristic onset, its causation and the typical history covering a period of several years.

2. The term "trigger zone" is for the first time used to denote the area stimulation of which produces the pain associated with the syndrome of glomus tumor.

3. The typical appearance of the tumor and its extreme sensitivity to touch and to changes of temperature should make the diagnosis simple.

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4643 Prairie Ave.

ACUTE URINARY SUPPRESSION FOLLOWING SULFADIAZINE THERAPY

C. FREDERIC ROCHE, M. D.,
LEE W. ELGIN, M. D.,
AND
DONALD G. STANNUS, M. D.
MIAMI BEACH

There have been comparatively few complications with sulfadiazine therapy; urinary suppression, in particular, has rarely been reported. During the past few weeks, however, reports of cases have appeared in the journals. Raines[1] described a case, as did Schulte, Shidler and Niebauer.[2] In the fatal case reported by Hellwig and Reed[3] severe degeneration of the convoluted tubules was present. The case here reported recently came under our observation.

REPORT OF A CASE

A 53 year old man, who had had chronic cardiovascular disease for 10 years associated with numerous chest colds and who had had almost a continuous bout with respiratory infection throughout the winter preceding examination, was obliged on May 24, 1942, to go to bed because of a temperature of 102 F., dyspnea and cough. Examination of the patient in his home revealed pulmonary changes in the right side of the chest posteriorly. Treatment with sulfadiazine, 15 grains after each meal, was cautiously started. Two days later the amount administered was increased to 15 grains every four hours or 90 grains daily for the next five days with a resultant normal temperature and improvement in the condition. The patient was given 540 grains or 36 Gm. of sulfadiazine in seven days. We were unable to hospitalize the patient at this time; hence no determination of the concentration of the drug in the blood was made.

Three days following the discontinuance of sulfadiazine the patient complained of a severe dysuria. That night, June 2, at 11 p. m., there developed severe pain in the left inguinal region radiating into the scrotum. He was given ¼ grain of morphine sulfate at that time and again four hours later. The next day, in addition to the pain on the left side, pain on the right side was present and he was passing bloody urine, in which on microscopic examination wheat sheath crystals and red blood cells were revealed. He was removed to the hospital where he was given 15 grains of sodium bicarbonate every four hours, and glucose and saline were administered intravenously. Catheterization at 9 p. m. resulted in the recovery of 75 cc. of urine, which represented the amount the kidneys had secreted in twelve hours.

The concentration of sulfadiazine in the blood was 2 mg. per hundred cubic centimeters. The nonprotein nitrogen content was 40.9 mg. The urologist consulted (L. W. E.) succeeded in catheterizing the right ureter with

the patient experiencing prompt relief of pain, but he could not gain admittance to the left ureteral orifice. After a fairly comfortable night the patient on June 4 experienced more pain on the left side. He was given 4,180 cc. of fluid, and the urinary output was 735 cc. The hydrogen ion concentration remained at 5.0. A second cystoscopic examination was made, but the left ureter again could not be catheterized. On the next day he became more dyspeneic, and slight pulmonary edema developed. Treatment was started with one ampule of digifolin, 1 cat unit every four hours, and the patient was placed in an oxygen tent. He still continued to have severe pain on the left side.

On June 6, the hydrogen ion concentration of the urine was 6.0. The temperature rose to 101.4 F.; previously, it had hovered around 99 F. Cystoscopic examination was again made. A small hard mass was removed from the left ureteral orifice, but still the ureter could not be catheterized. When, however, 5 cc. of indigo carmine was given intravenously, the dye appeared in fifteen minutes on the right side and in forty minutes issued from the left ureteral orifice, indicating drainage from both sides. There was only slight pain on the left side following the cystoscopy.

Increasing pulmonary edema developed that day, and it became necessary to restrict the intake of fluids. Also, salyrgan theophylline solution was administered intravenously. A venesection of 500 cc. of blood on June 7 gave the patient instant relief, and his progress was uneventful thereafter.

COMMENT

It is important to see that a patient receiving sulfadiazine therapy has a urinary output of at least 1,000 cc. daily. We concluded that our patient's intake was good, but that the output was insufficient because of excessive perspiration during the summer months. In the case reported by Schulte, Shidler and Niebauer,[2] however, urinary suppression occurred in spite of the fact that the patient had an output of 2,000 cc. daily during the entire period in which sulfadiazine therapy was administered. The best check would be a daily examination of the urine for blood and crystals.

When a diagnosis of obstruction is made, it is important to have a cystoscopic examination made immediately to relieve the ureteral obstruction. We believe our difficulty in relieving the left ureter was due to the patient's failure to consent to immediate cystoscopy, the delay resulting in greater crystallization.

There seems to be a great difference in the amount of the drug a patient can take without symptoms. In the case reported by Raines[1] the patient experienced urinary suppression within seventy-two hours after sulfadiazine therapy was begun, and during that period about 7 Gm. had been administered. As suggested by Colbert and Raines,[1] the nutritional status enters into the amount of the drug a patient can safely take. In the case of our patient, the circulatory status was poor because of the long-standing chronic failure associated with bronchopneumonia, which made him a good subject for such an accident.

It was also noticed that when the temperature of the patient went up to 101.4 F. on the fourth day of hospitalization, the urinary output increased to almost double. This was Raines'[1] observation in his case, and in both instances it supports Carroll's statement that heat makes for greater solubility of the acetyl salt of sulfadiazine. Perhaps the suggestion of heat therapy, such as diathermy or some other form, would be of value. There is definite evidence that the more alkaline the urine the greater the solubility of the acetyl form of sulfadiazine. Hence using the same amount of sodium bicarbonate as sulfadiazine would seem to be a good prophylactic measure.

SUMMARY

A case of urinary suppression following sulfadiazine therapy is reported.

A urinary output of at least 1,000 cc. daily should be required of every patient taking sulfadiazine and frequent examination for blood and wheat sheath crystals should be made.

At the first sign of obstruction, such as pain in the flank, hematuria and slight suppression, the patient should be given the immediate benefit of ureteral catheterization.

Heat therapy, such as diathermy, may be an aid to the solution of the acetyl form of sulfadiazine. High body temperature does not favor crystal formation.

Alkalization of urine to a hydrogen ion concentration of at least 6.5 is a good prophylactic measure in sulfadiazine therapy.

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ANNUAL CONVENTION

Next month's Journal will contain the complete program for the Seventieth Annual Convention of the Florida Medical Association, which is to be held in Jacksonville, Thursday afternoon and Friday forenoon, April 15 and 16, 1943. The George Washington Hotel will be headquarters.

President Gilbert S. Osincup and Dr. Herbert E. White, chairman of the Association's Committee on Scientific Work, will invite three distinguished physicians as speakers, one for each of the three general sessions. Their plan is to have one from the Procurement and Assignment Division, one from the Army and one from the Navy. The customary scientific sessions will be omitted, as the convention is to be streamlined in keeping with the war effort.

Although a special invitation will be extended by the officers of the Association to physicians in Florida who are with the armed services, it is hoped that our members will personally invite the medical officers whom they know or contact. The type of program that is offered should be of definite interest to every physician in military service.

Since no pre-convention meeting was held this year, Dr. Lloyd J. Netto, chairman of the Council, has requested his councilors to prepare their annual reports and forward them to Box 1018, Jacksonville, for publication in the Journal. Dr. Netto will present an official report for the Council at the first meeting of the House of Delegates. At the first meeting of the House of Delegates, Thursday afternoon, chairmen of all standing committees will present their annual reports, and other necessary business will be transacted. There will be no entertainment. The printed program will not include meetings of the specialty groups or the Woman's Auxiliary.

Our exhibitors are putting forth a special effort, in spite of transportation difficulties, to show what is new and how the old can be made to do.

The theme of the meeting will be war, and our members are urged to be in attendance as far as possible, in order that we may better serve in the war effort.

ARE YOUR SOCIETY DUES PAID?

Each member is requested and urged to pay his 1943 dues to his county society secretary not later than February. For a number of reasons it is important that members pay their current dues this month. The By-Laws require secretaries of county medical societies to forward dues and the names of members of county medical societies to the State Association's secretary at least thirty days in advance of the annual meeting.

Each county medical society's representation in the House of Delegates will be one delegate for each twenty members (or major fraction thereof). It is important that President Osincup have the names of delegates, from which to select appointments on the three reference committees of the House of Delegates. The earlier your county society dues and the names of official delegates are forwarded to the State Association's secretary, the better chance your society has for representation on these important committees.

Pay your 1943 dues at once and urge the secretary of your county medical society to forward his annual report by the end of February, if possible.

MEDICAL LICENSES GRANTED

Dr. W. M. Rowlett, secretary of the Florida State Board of Medical Examiners, reports that out of 31 applicants who took the State Board Examination in Jacksonville on November 23 and 24, 1942, 29 were successful in making the required average and have been duly issued licenses to practice medicine in Florida. The names and addresses of the successful applicants follow.

Adams, H. Herlong, Jacksonville (Ark., 1942).
Beale, S. James, Jacksonville (Tufts, 1942).
Bernstein, Aaron, W. Palm Beach (Md., 1939).
Boros, William K., Miami (Hahnemann, 1942).
Cieslak, Arthur K., Cleveland, O. (West. Res., 1941).

Crawley, Joseph H., Geneva, N. Y. (Columbia, 1930).
Dan, Julius M., Brooklyn, N. Y. (L. I. Coll., 1925).
Geeslin, Lawrence E., Jacksonville (Kan., 1934).
Green, Gordon L., Tampa (Louisville, 1939).
Hardgrave, George L., Jacksonville (Ark., 1942).
Holland, Ned W., Tampa (Tulane, 1939).
Jackson, Garrett, Orlando (Ark., 1931).
Kerman, Herbert D., Durham, N. C. (Duke, 1941).
Kimble, Leroy R., Wilmington, Del. (Hahnemann, 1942).
McCarthy, Alphonsus M., Ft. Benning, Ga. (Tenn., 1925).
McKenzie, George E., Wilkinsburg, Pa. (Pittsburgh, 1922).
Martin, Walter D., Jacksonville (S. C., 1942).
Nichols, Stanley H., Asbury Park, N. J. (Pa., 1910).
Page, Samuel W., Jr., Miami (Johns Hopkins, 1940).
Parrish, Albert A, Durham, N. C. (Duke, 1938).
Peek, Cecil M., W. Palm Beach (Johns Hopkins, 1940).
Phelan, William J., Jacksonville (Georgetown, 1942).
Pittman, Carl S., Jr., Jacksonville (Ga., 1942).
Ritchie, DeVere, Harrisburg, Pa. (Jefferson, 1924).
Serrano, Ernest E., Atlantic Bch. (Washington, 1938).
Shale, Rolla J., Tampa (Johns Hopkins, 1912).
Simmons, Melvin M., Winter Park (Vanderbilt, 1940).
Templeton, Earl R., Miami Beach (Syracuse, 1920)
Young, Leon R., Covington, La. (Ala., 1920).

MEMBERS IN ARMED SERVICES

Names and addresses of doctors in the Armed Services, received since the list was published in the November, December and January Journals:

DADE

Howell, R. Spencer ..... Miami

ESCAMBIA

Kennedy, S. G. ..... Pensacola

RETURNED TO PRIVATE PRACTICE

Murphree, Walter E. ..... Gainesville

DONATIONS FOR PURCHASE OF WAR BONDS

Under the plan sponsored by the Board of Past Presidents, the following donations have been received for the purchase of war bonds since the list was published in the January Journal:

DADE COUNTY $37.50

Pearson, Homer L., Miami

DUVAL COUNTY 321.25

Beals, John A., Jacksonville
Broadbent, Oliver P., Jacksonville
Caraway, A. F., Jacksonville
Carefoot, E. I., Jacksonville
Chapman, B. A., Jacksonville
Cleveland, R. H., Jacksonvile
Cone, Adolph, Jacksonville
Copp, F. A., Jacksonville
Croft, Theo. G., Jacksonville
Erwin, Stanley, Jacksonville
Fort, Frank L., Jacksonville
Henley, C. F., Jacksonville
Knauer, W. Jerome, Jacksonville
Manhoff, Ben, Jacksonville
Morris, Kenneth A., Jacksonville
Norris, S. R., Jacksonville
Pasco, J. D., Jacksonville
Schnauss, F. H., Jacksonville
Schnauss, W. R., Jacksonville
Veal, E. W., Jacksonville

ORANGE COUNTY 28.75

Pines, John A., Orlando
Seltzer, J. G., Orlando

BIRTHS AND MARRIAGES

BIRTHS

Dr. and Mrs. Sidney Halpern of Jacksonville announce the birth of a son, Norman Bruce, on January 8.

MARRIAGES

Dr. W. H. Walters and Miss Helen Hancock, both of Lacoochee, were married on November 25.

Dr. Ernest Thomas Kinsey of Miami and Miss Victoria C. Pepera of Madison were married on August 11.

STATE NEWS ITEMS

Dr. H. Mason Smith of Tampa was recently appointed chairman of the Board of Past Presidents to succeed the late Dr. W. P. Adamson. Dr. Smith, as leader of this Board, has been very successful in securing donations from the members at home to offset the dues of our members with the armed services.

On Wednesday night, January 20, Dr. Smith met with the members of the Orange County Medical Society, and on February 3 he addressed the members of the Pinellas County Medical Society at St. Petersburg. Dr. Smith is to be congratulated on the valuable service he and the members of the Board of Past Presidents are rendering. The amounts of donations, by county societies, have appeared from time to time in your Journal. The practice of most members at home increased as their colleagues went into military service. These members are urged to respond promptly to the appeal of the Board of Past Presidents.

Dr. Edward M. Coleman of Clermont has resumed practice and is now located in the Clinic Building. Dr. Coleman suffered a coronary occlusion attack in 1940.

Dr. Clarence Bernstein of Orlando has opened offices in Winter Park. He will confine his practice to allergy and internal medicine.

A number of Army and Navy medical officers joined with local, federal, state and county authorities, January 12, in Jacksonville, to discuss ways and means of reducing the prevalence of venereal disease in Florida, and its transmission to men in the armed services. Dr. Henry Hanson, the state health officer, presided. Those in attendance were so well pleased with the session that it was voted to hold similar meetings quarterly; the next one will be held in Jacksonville.

Dr. Eugene G. Peek of Ocala, president-elect, spent several hours in the Association's headquarters office at Jacksonville on February 4. Dr. Peek is busy with plans for his presidential year which begins April 16.

WILLIAM PARK ADAMSON

Dr. William P. Adamson of Tampa, chairman of the Board of Past Presidents of the Florida Medical Association, died on January 3, at the age of 68.

A native of Carrollton, Ga., he was the son of James Adamson and Mary Frances Fleming Adamson. He taught school for several years before entering the University of Georgia Medical College at Augusta, Ga., and upon graduation he served as intern there, then came to Tampa in 1901.

Two years later he married Miss Georgie Robey of Tampa, who died in 1913.

At the time of his death, Dr. Adamson, in addition to a heavy practice increased by the war, was a member of the Tampa district appeal draft board and a member of District 7 state welfare board, and he had just been made chairman of the Tampa Chamber of Commerce health service committee.

Dr. Adamson was a past president of the Hillsborough County Medical Society and also of the Florida Medical Association; he was a Fellow of the American Medical Association. He was a member of the Rotary Club, was a deacon in the First Baptist Church, a Mason and a member of Egypt Temple Shrine.

Dr. Adamson is survived by three daughters, Mrs. Clement B. Chinn of Miami; Mrs. J. Carlisle Stuckey of Oakley, S. C.; and Mrs. Ruth A. Hendry of Tampa; a sister in Carrollton, Ga., and two grandsons, J. Carlisle Stuckey, Jr., of Miami and Park Adamson Hendry of Tampa.

Dr. Adamson adhered strictly to the ethics of his calling and was unwaveringly loyal to the Hippocratic oath. Many who felt the touch of his healing skill and those who knew him as a clean and constructive citizen join in praise for his life and sorrow at his death.

DANIEL NEWMAN CONE

Dr. Daniel N. Cone, pioneer physician of Columbia County and White Springs, died at his home in White Springs on December 1 after an extended illness.

Dr. Cone was born at Benton on March 21, 1875, and had spent most of his life in that immediate community. Prior to his illness he was director of the Department of Epidemiology of the State Board of Health and supervised the establishment of health units throughout the state.

He was a graduate of the old Florida State College of Lake City and the medical school of the University of Virginia.

Survivors include his wife, Mrs. Sallie Mae Rowlett Cone; three sons: Commander D. N. Cone, U.S.N.; Lt. Commander J. I. Cone, U.S.N., and Lt. Dale S. Cone, U.S.A.; two daughters, Miss Sara Rowlett Cone and Mrs. P. J. Wagner of Jacksonville; one brother, Jack Cone, Lake City; one sister, Mrs. Mary Amy Mathers, White Springs, and one grandchild, Ruth Scott Cone.

WILLIAM JEFFERSON WILLIAMS

Dr. William J. Williams of Cassia died at Eustis on December 22, 1942, at the age of 64.

Dr. Williams was born at Trenton, on November 3, 1878. He received his medical education at the Hospital Medical College of Atlanta, from which he was graduated in 1911. Returning to Florida he practiced his profession at Seville, Volusia County, for twenty-two years, and then for three years at Fort White. In August, 1939, he became physician for the Wilson Cypress Company at Cassia, a position he held until the time of his death.

Survivors include his widow, Mrs. Berte Williams; one son, Lt. Norman E. Williams, M.C., USNR, and one stepson, Rudolph Henderson, of Cassia.

Dr. Williams was a member of the Lake County Medical Society, the Florida Medical Association, and the American Medical Association.

COMPONENT COUNTY SOCIETIES

ALACHUA

Dr. George C. Tillman of Gainesville was elected president of the Alachua County Medical Society at the annual meeting of that organization. Other officers elected were: Dr. John H. Thomas, Gainesville, vice president, and Dr. Chester F. Ahmann, Gainesville, secretary-treasurer.

BREVARD

The Brevard County Medical Society is among the first to report 100 per cent dues paid for 1943. Officers of this society for the current year are: Dr. Gerard E. Christie, Titusville, president; Dr. A. F. Thomas, Cocoa, vice president, and Dr. I. K. Hicks, Melbourne, secretary-treasurer. Congratulations, Brevard County Medical Society.

COLUMBIA

The annual meeting of the Columbia County Medical Society was held on the evening of January 4, at the Blanche Hotel, Lake City. Dr. H. S. Howell of Lake City was re-elected president and Dr. Thomas H. Bates of Lake City was re-elected secretary-treasurer. It was decided to hold the February meeting in Live Oak.

DADE

A meeting of the Dade County Medical Society was held on the evening of February 2, at the Jackson Memorial Hospital, Miami. The clinical program, under the direction of Commander W. W. Davies, M.C., U.S.N., Retired, consisted of a symposium on "Atypical Pneumonias," presented as follows:

(1) "Study of a Series at the U. S. Naval Air Station," Lt. Comdr. Warren Quillian; (2) "Radiologic Observations," Lt. Comdr. Frazier J. Payton; (3) "Therapy," Lt. Comdr. Frank R. Meyers, and (4) "Clinical Summary," Lt. Comdr. C. C. Rudolph.

DESOTO-HARDEE-HIGHLANDS-CHARLOTTE-GLADES

The DeSoto - Hardee - Highlands - Charlotte - Glades County Medical Society recently became the fourth society to report 100 per cent of dues paid for 1943. Heading this society are the following officers: Dr. M. C. Kayton of Wauchula, president, and Dr. C. H. Kirkpatrick of Arcadia, secretary-treasurer.

DUVAL

The Duval County Medical Society held its regular monthly meeting on February 2 at the Gulf Life Insurance Auditorium, Jacksonville. Dr. Lynne E. Baker, principal speaker, presented a paper on "Pulmonary Tuberculosis;" the discussion was opened by Dr. L. S. Laffitte. Refreshments were served following the meeting.

ESCAMBIA

Capt. William W. Hargrave and the staff at the Navy Hospital in Pensacola were hosts to the members of the Escambia County Medical Society at 8 p.m., January 12. Dr. Thomas Findley, New Orleans, spoke on "Syncope and Vertigo;" his paper was discussed by Lt. Comdr. Ashton Graybiel. Dr. W. E. Kittredge, New Orleans, presented a paper on "Traumatic Injuries of the Urinary Tract." Lt. Comdr. Paul Vaughn and Lt. E. A. Anderson discussed the treatment of burns at Pearl Harbor where facilities were extremely limited. Lt. Comdr. E. C. Herman presented a case of linitis plastica. An informal buffet supper was served after the meeting.

A special meeting was called on January 20, at which Col. C. K. Eskey, medical officer directing typhus control in the Southeast, and his engineer, Mr. Porges, were guest speakers. They discussed the typhus fever eradication program for the city of Pensacola.

LEE

Dr. H. Quillian Jones of Ft. Myers was elected president of the Lee County Medical Society at its annual meeting. Other officers chosen were: Dr. A. S. Byle, Ft. Myers, vice president, and Dr. William H. Grace, Ft. Myers, secretary-treasurer.

LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON

Dr. J. W. Sapp of Havana was elected president of the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society at a special meeting of the society held in the Floridan Hotel, Tallahassee, on January 21. Other officers elected were: Dr. John L. Williams, Tallahassee, vice president, and Dr. B. A. Wilkinson, Tallahassee, secretary-treasurer (re-elected). Dr. L. L. Dozier of Tallahassee and Dr. J. C. Davis of Quincy were named delegates and Dr. B. M. Rhodes, Tallahassee, and Dr. J. W. Sapp, Havana, were chosen as alternate delegates.

Following a long discussion, the doctors voted to continue their regular meetings during the war,

with Tallahassee and Chattahoochee as meeting sites. The meetings will be held in the evening and only one paper will be read at each meeting.

MANATEE

To the Manatee Medical Society goes the distinction of being the first society to report 100 per cent dues paid for 1943. The roster and dues from this society reached the Association treasurer on January 11. Officers of this society are: president, Dr. M. M. Harrison; vice president, Dr. John F. Mason; secretary-treasurer, Dr. Lowrie W. Blake, all of Bradenton. Congratulations, Manatee County Medical Society.

MARION

At the annual meeting of the Marion County Medical Society, held in December, the following officers were elected: Dr. T. Hartley Davis, president; Dr. Robbins Nettles, vice president, and Dr. Bertrand F. Drake, secretary-treasurer.

Dr. Henry C. Dozier of Ocala, past president of the State Association, now living in Oklawaha, was a surprise visitor at the January meeting of the society, held at Harrington Hall Hotel, January 21, at 12:30 p.m. Almost a full attendance of the members were present. After luncheon and a short business session, Dr. James L. Strange of McIntosh was granted permission to bring in two interesting patients. Their cases brought out a lively round table discussion.

ORANGE

Dr. Thomas E. McBride of Apopka was elected president of the Orange County Medical Society at the annual meeting of that body. Dr. Duncan T. McEwan of Orlando was elected vice president; Dr. John A. Pines of Orlando, secretary, and Dr. Walter A. Weed of Orlando, treasurer. Delegates chosen were: Drs. H. A. Day, J. S. McEwan, and Frank D. Gray; alternates: Drs. W. E. Sinclair, Hewitt Johnston and S. A. Folsom.

PASCO-HERNANDO-CITRUS

Dr. S. C. Harvard of Brooksville entertained the Pasco-Hernando-Citrus County Medical Society on the evening of January 14. After a delightful steak dinner at the Florida Cafe, the members of the society held a business and scientific session at Dr. Harvard's office. Dr. W. Wardlaw Jones of Dade City invited the society to meet with him in February.

PINELLAS

The members of the Pinellas County Medical Society were guests of the Bay Pines Hospital Staff at a dinner held on the evening of January 15, followed by a scientific program presented by members of the staff. Dr. Jones, chief surgeon, spoke on "Acute Hemorrhagic Pancreatitis." Dr. R. D. Tompkins, chief medical officer, discussed "The Heart After the Age of 40."

ST. JOHNS

At the annual meeting of the St. Johns County Medical Society, the following officers were elected: Dr. Alfred W. Norris, president; Dr. Herbert E. White, vice president; Dr. Charles C. Grace, secretary, and Dr. R. D. Harris, treasurer. Dr. White was chosen delegate and Dr. A. C. Walkup, alternate delegate.

ST. LUCIE-OKEECHOBEE-INDIAN RIVER-MARTIN

Dr. F. A. Gowdy is the new president of the St. Lucie-Okeechobee-Indian River-Martin County Medical Society. Dr. M. D. Council is vice president, and Dr. A. M. Sample is again serving as secretary-treasurer.

SEMINOLE

At the annual meeting of the Seminole County Medical Society, held on January 12, the following officers were elected: president, Dr. George H. Putnam; vice president, Dr. Theo. W. Langley, and secretary-treasurer, Dr. Leland H. Dame. Dr. Dame was named delegate and Dr. G. S. Selman, alternate delegate, to represent the society at the next convention of the State Association. It was decided to hold future meetings on board the yacht "Skylark" on Lake Monroe, at 5:30 p.m. on the second Tuesday of each month. It was voted also that in the future refreshments will be served.

VOLUSIA

At the annual meeting of the Volusia County Medical Society, the following officers were elected: Dr. Ludo von Meysenbug, Daytona Beach, president; Dr. W. C. Chowning, New Smyrna Beach, vice president, and Dr. R. L. Miller, Daytona Beach, secretary-treasurer (re-elected).

The society held a dinner meeting at 7 p.m., January 12 at the New Smyrna Beach Hotel, followed by a business meeting and round table discussion.

BOOKS RECEIVED

Acknowledgment of books received will be made in this column and this will be deemed by us a full compensation to those sending them. A selection will be made for review as expedient.

NEW AND NONOFFICIAL REMEDIES, 1942, Containing descriptions of articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1942.

Perhaps the most important feature of this new volume of New and Nonofficial Remedies is the radical rearrangement it has undergone, which it is believed will make the contents more accessible and therefore more valuable to the physician or other interested readers. Heretofore, the classification of products has been basically that of chemical relationship; the new arrangement is primarily according to therapeutic use, chemical classification being introduced by means of subheadings. In addition, the typographic style has been changed so as to give greater prominence to the products of individual manufacturers. No valuable feature has been sacrificed. The book still fulfills its function of establishing chemical standards for new and nonofficial preparations which the Council has found to be useful or to give adequate promise of usefulness in the treatment or prevention of disease. Its function as a guide to the most recent advances in therapeutics has been greatly enhanced.

Careful examination of the general discussions under the various headings and subheadings shows that the Council has admirably performed its annual task of keeping the text abreast with the progress of medicine. The authoritative and compendious section of the sulfonamide derivatives is an outstanding example. So also is the chapter, Vitamins and Vitamin Preparations for Prophylactic and Therapeutic Use. Equally important though less extensive revisions have been made in such sections as Aluminum Compounds, Dextrose, Gonadotropic Substances, Liver and Stomach Preparations, Ovaries, Parathyroid, Pituitary, and Testes.

Among the newly accepted drugs are: Acetyl-Beta-Methylcholine and the proprietary brand, Mecholyl Chloride, proposed for use by iontophoresis, orally and subcutaneously as a parasympathetic stimulant; Adrenal Cortex Extract for parenteral use in the treatment of Addison's disease or of adrenal insufficiency of other types as well as prophylactically in surgical procedures involving the adrenal cortex; Aluminum Hydroxide Gel with the proprietary brand, Creamalin, for oral use as an adjunct in the treatment of peptic (gastric and duodenal) ulcer; and Normal Human Serum and Normal Human Plasma.

Others worthy of mention are: Cyclopropane, another general anesthetic, now included in the U. S. P.; Amylcaine Hydrochloride, another proprietary local anesthetic and Pernoston Sodium, the sodium salt of the previously accepted proprietary barbital derivative, Pernoston.

The indices of the new volume of New and Nonofficial Remedies are of the same order and plan as in previous editions. A general index lists accepted articles, including those not described. This is followed by an index to distributors in which appear all the Council accepted articles listed under their respective manufacturers. Finally, a bibliographical index is added for listing proprietary and unofficial articles not included in N. N. R. This includes references to the Council publications concerning each such article as has appeared in The Journal of the A. M. A., Reports of the Council on Pharmacy and Chemistry, Propaganda for Reform, Vol. 1 and 2, or Reports of the A. M. A. Chemical Laboratory. Cloth. Price, $1.50. Pp., 671. Chicago: American Medical Association, 1942.

Wine in Diabetes Mellitus?

(Read this free booklet)

AN authoritative summary, "The Therapeutic Uses of Wine," has been prepared in monograph form to answer such questions as this. In it, qualified and competent medical authorities review the pertinent scientific literature of present-day medicine. You are invited to write for this monograph.

The contents include sections on wine as a food and on the actions of wine on the gastro-intestinal system, the cardio-vascular system, the genito-urinary system, the nervous system and the muscles, and the respiratory system. The uses of wine in diabetes mellitus, in acute infectious diseases and in treatment of the aged and convalescent are also discussed. The value of wine as a vehicle for medication is dealt with, and an important section on the contraindications to the use of wine is included. An extensive bibliography is presented for those who may wish to pursue the subject further.

This review results from a study supported by the Wine Advisory Board, an agricultural industry administrative agency established under the California Marketing Act, and has been sponsored by the Society of Medical Friends of Wine.

Members of the medical profession are invited to write for this monograph. Requests should be made to the Wine Advisory Board, 85 Second Street, San Francisco.



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ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1941, WITH THE COMMENTS THAT HAVE APPEARED IN THE JOURNAL.

The Council on Pharmacy and Chemistry recently issued the thirty-third edition of the Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association. This volume contains in compact form not only the reports of the Council which have been published in The Journal during the past year but also some additional reports which were not considered of sufficient importance to be published in The Journal. The reports may be divided into four classes: reports rejecting products as not being acceptable for inclusion in the New and Nonofficial Remedies, reports omitting from New and Nonofficial Remedies products that have been previously accepted, reports on the nomenclature of various substances and reports in which the Council gives decisions of general interest or summarizes the latest scientific knowledge concerning certain topics. The last classification includes the largest number of reports. One article deals with the developments in bacteriophage therapy since the previous report of the Council in 1934. Other reports bring to the present day the status of such products as aluminum hydroxide preparations, antipneumococcic serums, cyclopropane, human blood plasma and serum, human convalescent poliomyelitis serum, human convalescent mumps serum and sulfadiazine. Such topics as ion transfer (iontophoresis), halogenated vegetable oils for bronchography and the problem of lipid pneumonia and the sympathomimetic amines as epinephrine substitutes are discussed. The nomenclature reports deal for the most part with the Council's adoption of nonproprietary designations for comparatively new products such as diethylstilbestrol, menadione and sulfadiazine. Explanations are given for the omission at this time of products which have previously been included in New and Nonoffical Remedies. In most cases the N. N. R. description is included in the report as a matter of record. The volume also includes the reports rejecting various products—which have either been submitted by the manufacturer or considered on the Council's own initiative—and which have been found not acceptable for inclusion in New and Nonofficial Remedies. Also incorporated is a brief summary of the decisions arrived at by the Council at its latest meeting. Cloth. Price, $1.00. Pp., 187. Chicago: American Medical Association, 1942.

PHARMACOPOEIA OF THE UNITED STATES, TWELFTH REVISION. Prepared by the Committee of Revision and Published by the Board of Trustees, by authority of the United States Pharmacopoeial Convention, Meeting at Washington, D. C., May 14 and 15, 1940. The long list of added items indicates the up-to-date character of the new book. The Twelfth Revision marks a new era in the growth and development of Pharmacopoeias. For the first time a program is fully launched for a new Pharmacopoeia every five years, a bound "Supplement" halfway between, and, to meet the frequently occurring situations which require immediate attention, "Interim Revision Announcements" or sheet "Supplements," whenever these are required. By these accelerated procedures the Pharmacopoeia is endeavoring to keep pace with the rapid develepments of modern medicine and the related sciences. Electrotyped, printed and distributed by Mack Printing Company, Easton. Pa.

WAR MEDICINE.. Edited by Winfield Scott Pugh, M.D., Commander, U.S.N. Retired. This book is a symposium covering three general headings: surgery, aviation and naval medicine, and general medicine. Cloth. Price, $7.50. Pp. 565, with illustrations. New York: Philosophical Library, Inc., 1942.

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OTOLARYNGOLOGY — Two Weeks Intensive Course starting April 19.

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PRESIDENT'S MESSAGE

Dear Co-Workers:

Our plans for a state convention will be streamlined this year to conform with the plan adopted by the Woman's Auxiliary to the American Medical Association.

Each county auxiliary is asked to appoint a delegate as its representative at a short business meeting which I will call early in the spring, the time and date to be announced later.

It will be necessaary to elect officers and committee chairmen for the coming year in order to carry on our work which seems vital to the national defense program at this time. If we do nothing more than sponsor a defense project, it will be worthwhile to keep the Auxiliary intact, so go ahead as you have in the past and plan your work accordingly. As an Auxiliary to the Medical Association, we can't afford to be indifferent because the health of our nation is still our first line of defense. Today, more than ever before, our doctors are called upon to render a distinguished service to humanity. Can we be content to fold our hands and sit idly by while they struggle to keep the nation physically fit? It becomes your duty and mine to help, and I can think of no better way than to keep our auxiliaries functioning as a single unit, so that our influence for good may be felt throughout the nation.

Please send a report of your work for the year to your state chairman as all reports must be

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assembled into one general report before the national meeting in June. Again, I am requesting each county auxiliary president to send me a list of officers and committee chairmen. It is necessary that I have this information at once. Remember, cooperation is the key to success. Thank you.

(Mrs. F. W.) Lydia Krueger, President.

DUVAL COUNTY AUXILIARY

The quarterly meeting of the Woman's Auxiliary to the Duval County Medical Society was held in the home of Mrs. Victor Hughes on Thursday, January 14, with Mrs. Edward Jelks and Mrs. J. W. Hayes serving as co-hostesses.

Mrs. S. R. Norris introduced the guest speaker, Lieut. Linda V. Barnes, of New York City, who gave a most interesting address on "The Life of a WAAC." A round table followed at which time numerous questions of interest to civilians were answered by Lieut. Barnes.

Reports from the various committee chairmen showed a great increase in the activities of the Auxiliary during the past few months.

The defense chairmen, Mrs. Charles Henley and Mrs. George Richardson, reported a very successful Hallowe'en Party given for the service men in the WPA Recreation room in October. Auxiliary members sold $50.65 worth of tuberculosis seals at the Roosevelt Hotel booth in December, and assisted with the blood bank to the amount of $335.22.

Mrs. F. W. Krueger, state president, gave a brief talk on the ideals and objectives of the National Auxiliary and urged members to cooperate in every way possible to help make the work of the Woman's Auxiliary to the Florida Medical Association of outstanding importance this year.

Following the business session, a delightful social was enjoyed. Delicious refreshments were served from a beautifully appointed table, overlaid with an exquisite lace and embroidered linen cloth and centered with a low white bowl of blue and pink flowers of unusual design; white candelabra with blue candles stood on either side. Mrs. Edward Jelks and Mrs. J. W. Hayes poured tea.

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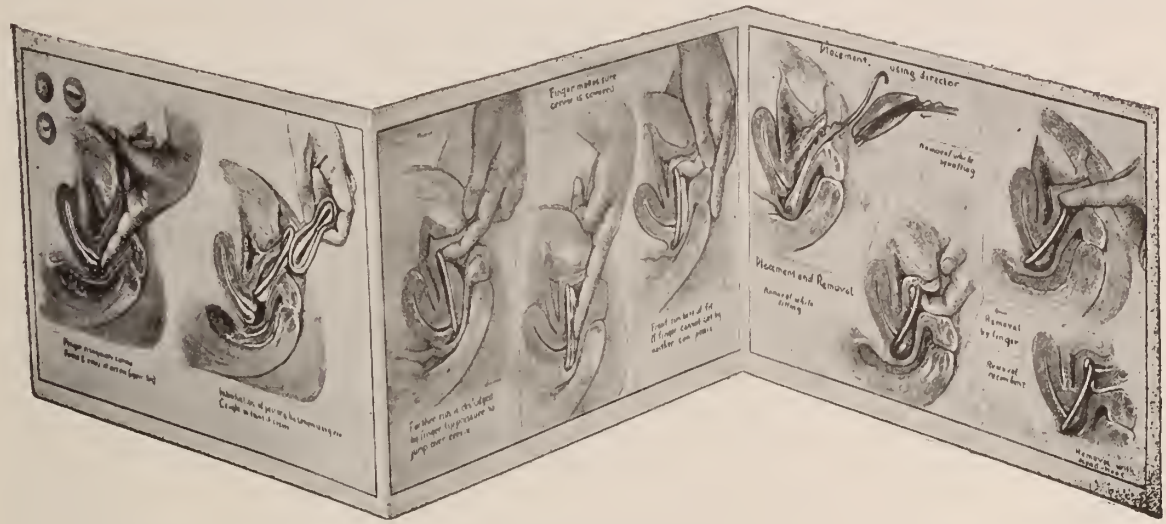
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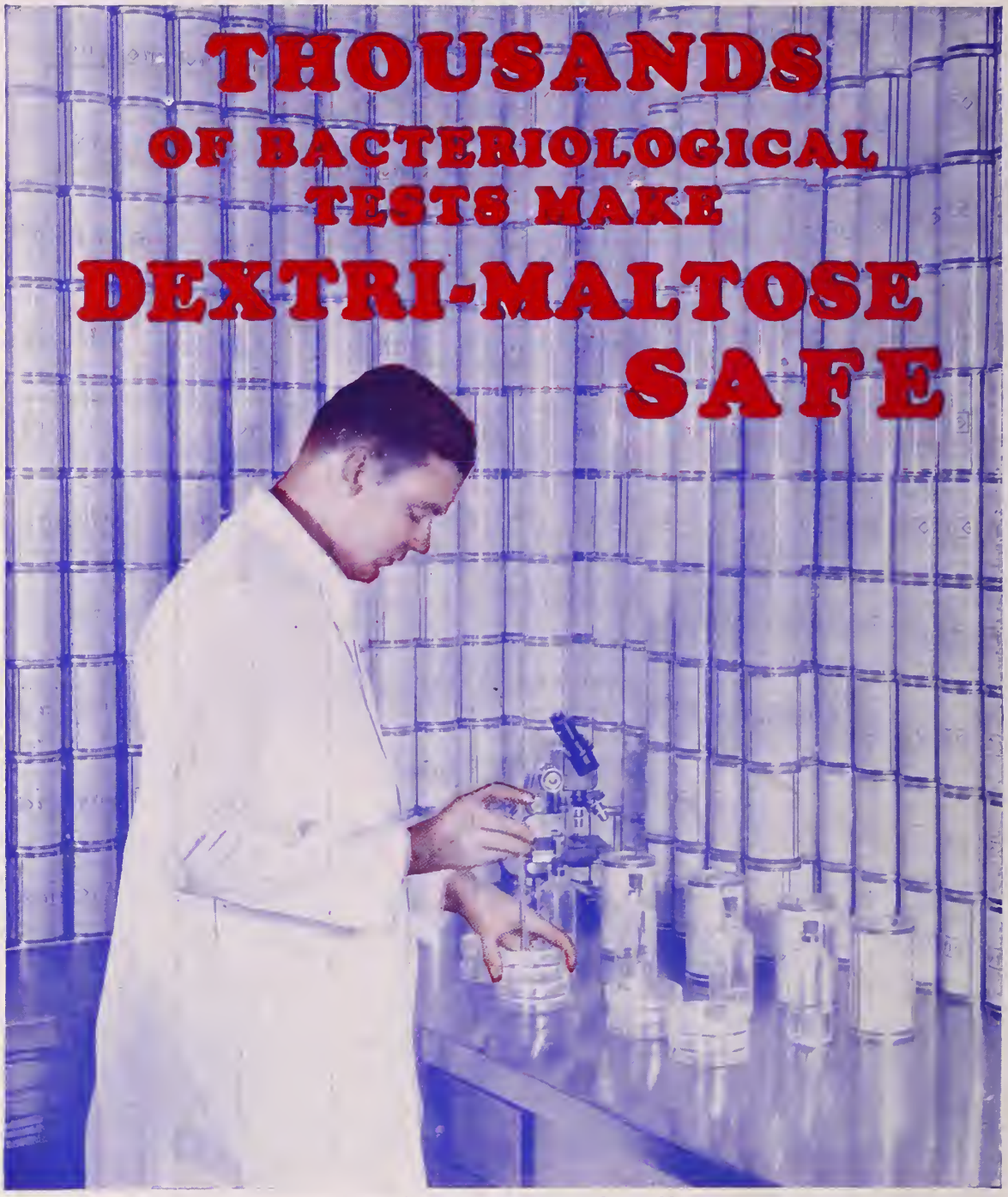
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STATE AND SECTIONAL MEETINGS

SOCIETY	PRESIDENT	SECRETARY	ANNUAL MEETING
Florida Medical Association	Gilbert S. Osincup, Orlando	Shaler Richardson, Jacksonville	Jacksonville, April 15-16, 19
Florida Medical Districts:			
A—Northwest	Courtland D. Whitaker, Marianna	Stewart Thompson, Jacksonville	Tallahassee, Postponed
B—Northeast	L. Y. Dyrenforth, Jacksonville	" " "	Ocala, Postponed
C—Southwest	Edgar Watson, Lakeland	" " "	Sarasota, Postponed
D—Southeast	William Y. Sayad, W. Palm Beach	" " "	Miami, Postponed
Alabama Medical Association	H. B. Searcy, Tuscaloosa	D. L. Cannon, Montgomery	Birmingham, Apr. 20-22, 194
Georgia, Medical Assn. of	James A. Redfearn, Albany	E. D. Shanks, Atlanta	Atlanta, May 11-14, 1943
Florida—			
Section, Am. College Phys.	R. H. Knowlton, St. Petersburg	Kenneth Phillips, Miami	To Be Announced
Dental Society, State	A. Malcolm Smith, D.D.S., Tampa	H. L. Cartee, DDS., Miami	
Derm. and Syph., Soc. of	Wiley M. Sams, Miami	Lauren M. Sompayrac, Jacksonville	To Be Announced
East Coast Medical Association	T. C. Kenaston, Cocoa	I. M. Hay, Melbourne	Postponed
Hospital Association	Mr. Ernest G. McKay, Tampa	Mr. R. L. Martin, St. Petersburg	Tampa—Postponed
Industrial Surgeons, Assn. of	Frank D. Gray, Orlando	Richard H. Walker, Orlando	To Be Announced
Medical Postgraduate Course	Turner Z. Cason, Jacksonville	Chairman	
Nurses Association, State	Mrs. Ann Thompkins, Leesburg	Miss Madalee Hazel, St. Petersburg	
Ophthal. & Otol., Soc. of	Shaler Richardson, Jacksonville	C. E. Dunaway, Miami	To Be Announced
Pathological Society	L. Y. Dyrenforth, Jacksonville	Iva C. Youmans, Miami	To Be Announced
Pediatric Society	Ludo von Meysenbug, Daytona B.	Robert Blessing, Ft. Lauderdale	To Be Announced
Pharmaceutical Association, State	Mr. Emmett L. Brown, Palatka	Mr. R. Q. Richards, Ft. Myers	
Public Health Association	W. H. Pickett, Jacksonville	Lloyd N. Harlow, Jacksonville	Postponed
Radiological Society	John N. Moore, Ocala	Walter A. Weed, Orlando	To Be Announced
Railway Surgeons' Association	Frank D. Gray, Orlando	W. C. Page, Cocoa	To Be Announced
Tuberculosis & Health Assn.	Mr. E. M. Newald, Orlando	Mrs. C. R. Whitaker, Eustis	To Be Announced
Chattahoochee Valley Med. Assn.	Herbert E. White, St. Augustine	Robert B. McIver, Jacksonville	Postponed
Gulf Coast Clinical Society	G. G. Oswalt, Mobile, Ala.	C. L. Rutherford, Mobile, Ala.	
S.E. Sec., Am. Cong. Phys. Ther.	John J. McGuire, Pensacola	Kenneth Phillips, Miami	
Southeastern Surgical Congress	Alton Ochsner, New Orleans	B. T. Beasley, Atlanta	Postponed
Southern Medical Association	Harvey F. Garrison, Jackson, Miss.	Mr. C. P. Loranz, Birmingham	To Be Announced
Suwannee River Medical Society	L. J. Arnold, Jr., Lake City	H. S. Howell, Lake City	

COMPONENT SOCIETIES BY DISTRICTS

	SOCIETY	PRESIDENT	SECRETARY	MEETING DATE	MEMBERS Total	MEMBERS Paid	COUNCILOR
A	Bay	J. Powell Adams, M.D. Panama City	J. O. Barfield, M.D. County Health Unit Panama City		11	4	
A	Escambia *Santa Rosa	Alvyn W. White, M.D. 24 W. Chase St. Pensacola	Lee Sharp, M.D. 24 W. Chase St. Pensacola	2nd Tuesday 8:00 P.M.	52	16	A-1-43 C. D. Whitaker, M.D. Marianna
A	Franklin-Gulf		J. R. Norton, M.D. Port St. Joe	3rd Tuesday Odd Months	4	0	
A	Jackson *Calhoun	W. R. Wandeck, M.D. Marianna	R. N. Joyner, M.D. Marianna	2nd Tuesday 7:30 P.M.	12	1	
A	Walton-Okaloosa	A. G. Williams, M.D. Lakewood	R. B. Spires, M.D. DeFuniak Springs	3rd Thursday 8:00 P.M.	6	0	
A	Washington-Holmes	N. J. Dawkins, M.D. Vernon	B. W. Dalton, M.D. Vernon		6	1	
A	Columbia *Baker, Hamilton	Harry S. Howell, M.D. Blanche Hotel Annex Lake City	Thomas H. Bates, M.D. Blanche Hotel Annex Lake City	1st Monday 7:30 P.M.	12	9	A-2-44 William D. Rogers, M.D. Chattahoochee
A	Leon-Gadsden-Liberty-Wakulla-Jefferson	James W. Sapp, M.D. Havana	B. A. Wilkinson, M.D. Telephone Bldg. Tallahassee	Quarterly 8:00 P.M.	39	11	
A	Madison-Suwannee	Eustace Long, M.D. Madison	E. D. Thorpe, M.D. Madison		8	0	
A	Taylor *Dixie, Lafayette	J. C. Ellis, M.D. Perry	Chas. A. O'Quinn, M.D. Perry	Last Friday 8:00 P.M.	5	0	
B	Alachua *Bradford, Gilchrist, Union	Geo. C. Tillman, M.D. 505 W. University Gainesville	Chester F. Ahmann, M.D. 1043 W. Masonic Gainesville	2nd Wednesday 7:30 P.M.	28	15	B-3-43 L. Y. Dyrenforth, M.D. Jacksonville
B	Duval *Clay	T. Z. Cason, M.D. 2033 Riverside Ave. Jacksonville	F. A. Copp, M.D. 411 St. James Bldg. Jacksonville	1st Tuesday 8:15 P.M.	194	132	
B	Marion *Levy	T. Hartley Davis, M.D. 202 Commercial Bk. Bldg. Ocala	B. F. Drake, M.D. Professional Bldg. Ocala	3rd Thursday 12:30 P.M.	29	26	
B	Nassau	Geo. A. Dame, M.D. Fernandina	E. F. Waite, M.D. Fernandina	2nd Wednesday 8:00 P.M.	7	100%	
B	Putnam	J. Worth Brantley, M.D. Grandin	C. M. Knight, M.D. Palatka	2nd Tuesday Even Months 7:00 P.M.	10	2	
B	St. Johns	Alfred W. Norris, M.D. Flagler Hospital St. Augustine	Charles C. Grace, M.D. East Coast Hospital St. Augustine	3rd Tuesday 8:30 P.M.	12	4	
B	Brevard	G. E. Christie, M.D. Box 151 Titusville	I. K. Hicks, M.D. Melbourne	3rd Wednesday	11	100%	B-4-44 Meredith Mallory, M.D. Orlando
B	Lake *Sumter	H. S. Cherry, M.D. Center Hill	R. H. Williams, M.D. County Health Unit Eustis	1st Thursday 12:30 P.M.	19	8	
B	Orange *Osceola	T. E. McBride, M.D. Apopka	John A. Pines, M.D. 106 E. Central Ave. Orlando	3rd Tuesday 5:30 P.M.	93	42	
B	Seminole	Geo. H. Putnam, M.D. Touchton Bldg. Sanford	Leland H. Dame, M.D. Co. Health Unit Sanford	2nd Tuesday 5:30 P.M.	12	4	
B	Volusia *Flagler	W. C. Pay, M.D. 221 W. Rich Ave. DeLand	R. L. Miller, M.D. 258½ S. Beach St. Daytona Beach	2nd Tuesday 7:30 P.M.	44	27	
C	Hillsborough	T. C. Maguire, M.D. 104 S. Collins St. Plant City	James S. Grable, M.D. 811 Citizens Bldg. Tampa	1st Tuesday 8:00 P.M.	105	67	C-5-44 Leland F. Carlton, M.D Tampa
C	Manatee	M. M. Harrison, M.D. Professional Bldg. Bradenton	L. W. Blake, M.D. Bradenton	3rd Tuesday 7:00 P.M.	14	100%	
C	Pasco-Hernando-Citrus	W. W. Jones M.D. Dade City	G. R. Creekmore, M.D. Brooksville	2nd Thursday 7:00 P.M.	11	6	
C	Pinellas	W. C. McConnell, M.D. 313 First Federal Bldg. St. Petersburg	Annette M. Feaster, M.D 166 Fourth Ave. N. E. St. Petersburg	1st and 3rd Fridays 6:30 P.M.	106	67	
C	Sarasota	O. H. Cribbins, M.D. 138 N. Link Sarasota	A. O. Morton, M.D. Commercial Court Sarasota	2nd Tuesday 8:30 P.M.	20	10	
C	DeSoto-Hardee-Highlands-Charlotte-Glades	M. C. Kayton, M.D. Wauchula	C. H. Kirkpatrick, M.D. Box 454 Arcadia	Quarterly	20	100%	C-6-43 Edgar Watson, M.D. Lakeland
C	Lee *Collier, Hendry	H. Quillian Jones, M.D. 18 Leon Bldg. Fort Myers	W. H. Grace, M.D. Box 907 Fort Myers	3rd Tuesday 7:30 P.M.	17	15	
C	Polk	T. G. Simmons, M.D. Corlett Bldg. Auburndale	Edgar Watson, M.D. Box 1021 Lakeland	2nd Wednesday 1:00 P.M.	61	33	
D	Palm Beach	O. B. Hazen, M.D. Comeau Bldg. W. Palm Beach	D. W. Martin, M.D. 618 Comeau Bldg. W. Palm Beach	4th Monday 8:00 P.M.	69	18	D-7-43 William Y. Sayad, M.D. West Palm Beach
D	St. Lucie-Okeechobee-Indian River-Martin	Francis A. Gowdy, M.D. Box 745 Ft. Pierce	Adrian M. Sample, M.D. Box 176 Ft. Pierce	3rd Thursday 8:00 P.M.	17	14	
D	Broward	D. W. Harris, M.D. 420 Sweet Bldg. Ft. Lauderdale	O. C. Brown, M.D. 915 Sweet Bldg. Fort Lauderdale	2nd Wednesday 8:00 P.M.	41	32	D-8-44 Elbert McLaury, M.D. Hollywood
D	Dade	H. L. Pearson, M.D. 416 Ingraham Bldg. Miami	Wiley M. Sams, M.D. 305 Ingraham Bldg. Miami	1st Tuesday 8:30 P.M.	341	136	
D	Monroe	Harry C. Galey, M.D. 532 Fleming St. Key West	W. R. Warren, M.D. 511 Eaton St. Key West	1st Sunday 9:00 P.M.	5	0	



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The JOURNAL of the Florida Medical Association, Inc.

Vol. XXIX APRIL, 1943 No. 9

THE N.Y. ACADEMY OF MEDICINE
MAR 31 1943
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NOTICE—This Journal is dated April instead of March. The date of issue has been advanced one month, but the mailing schedule remains unchanged. Explanation on page 436.

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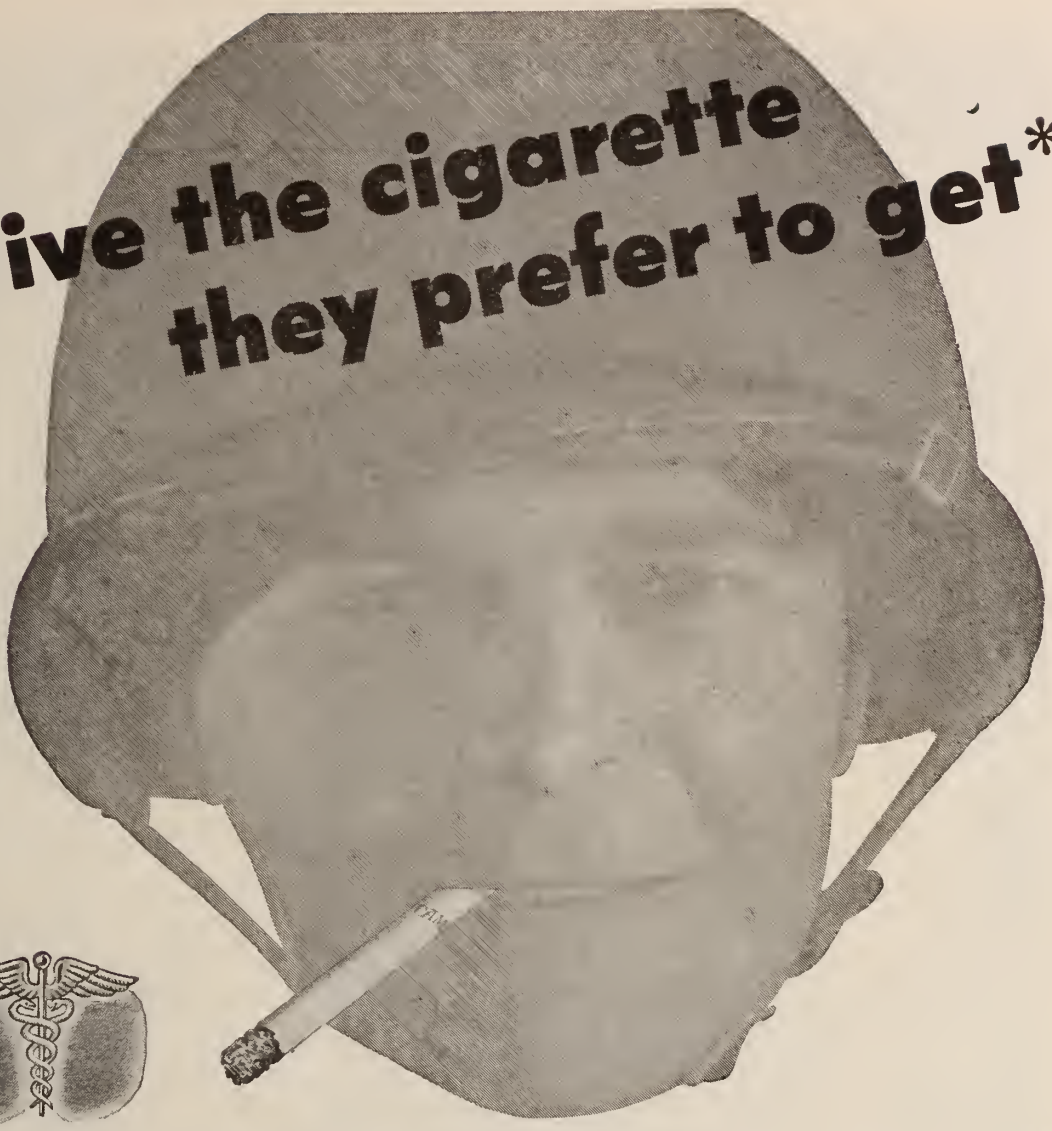
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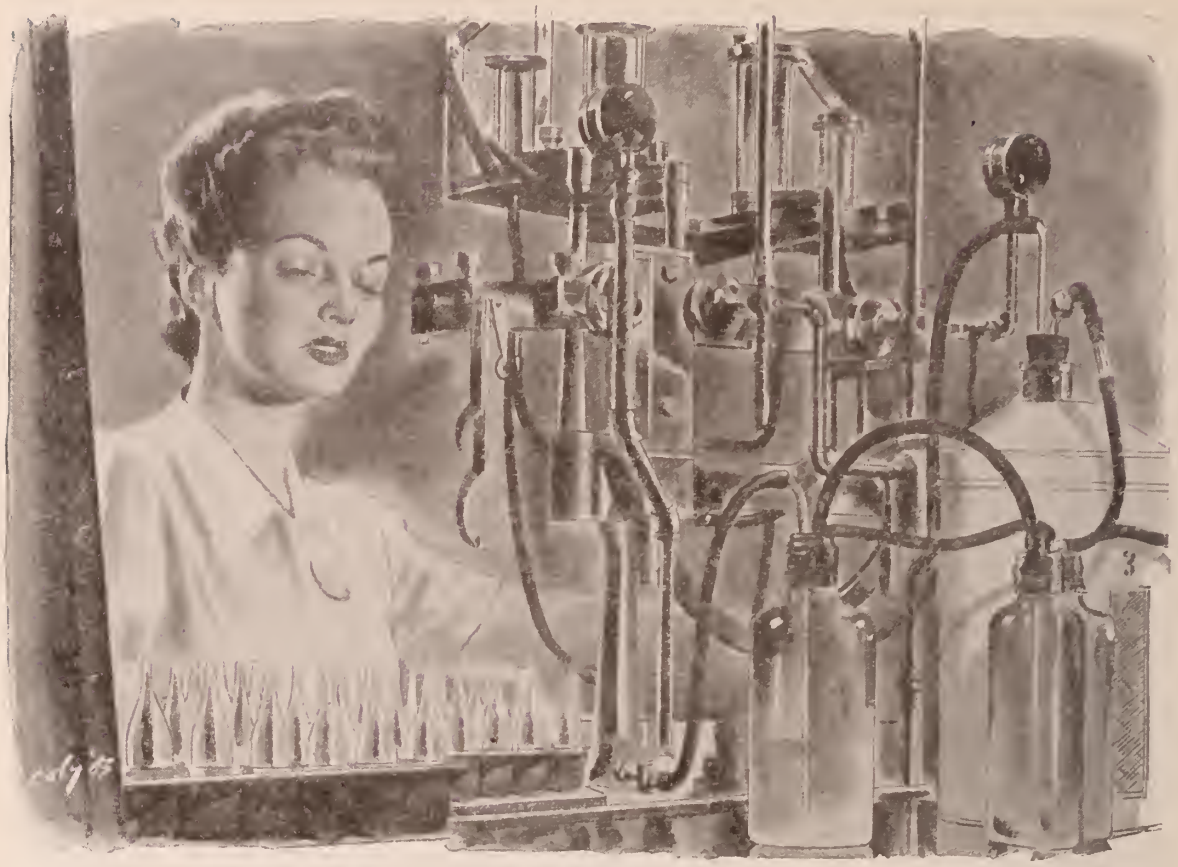
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ATELECTASIS: A POSTOPERATIVE COMPLICATION IN RENAL AND URETERAL SURGERY

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AND
D. R. SEABAUGH, M. D.*
JACKSONVILLE

The purpose of this paper is to add to the accumulated literature a report of 5 cases of postoperative atelectasis, offered as added proof of the thesis recently presented by Rolnick and Singer regarding this complication. These authors concluded that etiologically this condition is of mechanical origin, that it occurs more frequently following renal and ureteral surgery than any other type of surgical intervention, and that it always occurs on the contralateral side.

As an entity atelectasis has been recognized for many years, and excellent descriptions of the roentgen characteristics, the clinical course and effective treatment have been spread through the literature since the early nineteen hundreds. Regarding the etiology, however, there has been much confusion. The many theoretic explanations include (1) angioneurotic-like edema of the bronchial mucous membranes, (2) bronchial spasm, (3) vagal paralysis, (4) the vasomotor theory suggesting dilatation and stasis of the pulmonary blood vessels, and (5) mechanical obstruction.

The condition has been observed following practically every type of surgical procedure. Occasionally it follows slight trauma to a distant part of the body, but in general it occurs most frequently in surgery of the upper portion of the abdomen. In renal and ureteral surgery it is of particularly frequent occurrence since the position of the patient tends to permit an accumulation of mucus in the contralateral lung solely by a process of gravity. Because of the patient's position this lung expands and contracts only to a very limited extent during the entire period of the operation, thus tending to allow a pooling of the accumulated mucus in one or more of the main bronchi. This condition persists after the patient leaves the operating room unless hyperventilation is resorted to at the conclusion of the operation. Additional aggravating factors are the preoperative administration of atropine, which produces a thickened tenacious bronchial secretion, and the administration preoperatively and postoperatively of opiates and barbiturates, both of which tend to depress respiration.

Until the patient has fully reacted, a process sometimes requiring many hours, the tidal air is small in volume, and respiration is shallow. During this period he is deriving oxygen from one lung while in the other the plug becomes increasingly firm as the mucus continues to accumulate. When reaction is eventually complete, he suppresses the desire to cough, even though coughing in itself might correct the difficulty instantly, because of the pain at the site of the incision which coughing produces.

By this time the air is being absorbed from the alveoli, the lung collapses, and the mediastinum with its contents shifts toward the affected side. The diaphragm on this side is elevated, and the lung on the unaffected side becomes emphysematous. The patient at this stage usually experiences some pain on the affected side; there may be cyanosis, and the rate of respiration may be accelerated. A cough frequently develops, which is at first always hacking and dry in character.

The temperature may be somewhat elevated. It is, however, difficult to determine the point at which the postoperative elevation of temperature terminates and the atelectatic rise begins for fever is notoriously associated with urologic manipulation. This difficulty was encountered in the series of cases herein presented. It was concluded that the elevated temperature is not caused by the presence of atelectasis as such, but rather by an infection which arises immediately in the obstructed air passages and eventually terminates in pneumonia, as illustrated in cases 4 and 5, if the condition is not recognized at once and relieved.

Since the absorption of the air from the alveoli takes place rather slowly, the lung collapses gradually, and the mediastinum shifts by degrees. Thus the immediate and spectacular symptoms of severe shock, dyspnea and cyanosis, observed, for example, in collapse due to traumatic pneumo-

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Read before the Duval County Medical Society, April 7, 1942. From the Department of Urology, St. Vincent's Hospital, Jacksonville.

thorax, are absent. In consequence, the condition is not usually recognized until the second or third postoperative day. It appears then, as shown in case 1, that unless routine examinations of the chest are made each day, atelectasis may go entirely unrecognized provided the patient has the good fortune eventually to cough up the offending mucus.

The rather insidious onset of atelectasis is no doubt responsible for the incorrect diagnosis of pneumonia in many cases. As the condition develops, the atelectatic character is lost, as illustrated in cases 4 and 5, and both the roentgen and clinical observations more closely simulate pneumonia.

In this series of 5 cases the involvement in each instance was on the contralateral side. Perusal of the literature revealed no case in which the atelectatic condition occurred on the side on which the operation was performed. In one of these cases, however, a secondary pneumonia developed that involved this side.

Hyperventilation was employed in all of the cases of this series. Carbon dioxide and oxygen were administered through a rebreathing apparatus until definitely labored breathing was produced. Most of the patients were given gravity bottles on which to blow. All of them were turned over on the side on which the operation had been performed as often and as much as the pain would allow in order to place the affected lung up. They were given expectorants and sulfathiazole to guard against the development of pneumonia.

In 3 of the cases recovery was uneventful, scarcely lengthening the period of hospitalization. Secondary pneumonia developed in the remaining 2 cases. In 1 of them (case 5) the use of oxygen was required for many days, and the period of convalescence was long and stormy. Early recognition of the true condition in this case might have prevented the severe secondary involvement.

REPORT OF CASES

Case 1.—W. S., a white man aged 32, was subjected to ureterolithotomy because of an impacted calculus in the upper third of the right ureter. Ethylene was used to produce anesthesia, and atropine and pantopon were administered preoperatively. The duration of the operation was fifty minutes.

A slight cough developed on the first postoperative day, and there was some pain in the left side of the chest on the following day when the roentgenogram shown in figure 1 was taken. The patient experienced no dyspnea, and cyanosis was not present. He began to expectorate foul mucus immediately after treatment was started. On the seventh postoperative day this sputum had disappeared, and three days later the patient was discharged from the hospital. The temperature chart

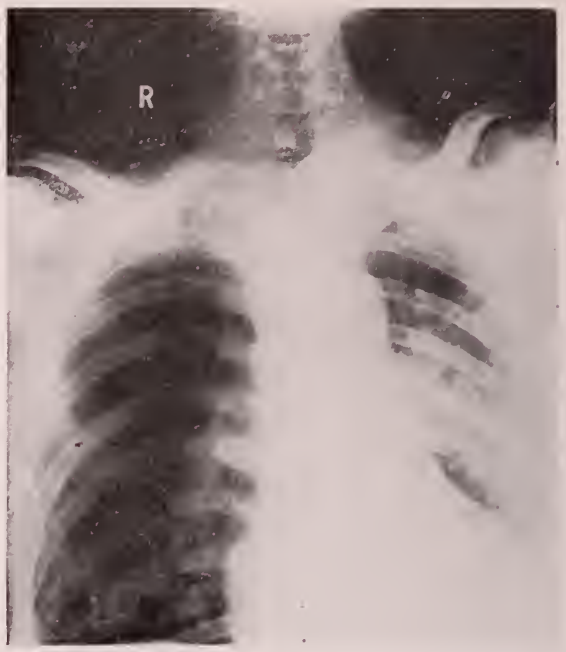


Fig 1 (case 1).—Roentgenogram showing atelectasis on the left side. This roentgenogram was taken on the second postoperative day.

shown in figure 2 indicates that the febrile reaction was not unduly severe following ureterolithotomy.

Case 2.—M. H., a white woman aged 56, entered the hospital with hydronephrosis and infection of the right kidney due to ureteropelvic obstruction. Pyeloplasty and nephrostomy were performed with the use of avertin and gas for producing anesthesia and the administration of atropine preoperatively. The operating time was one hour.

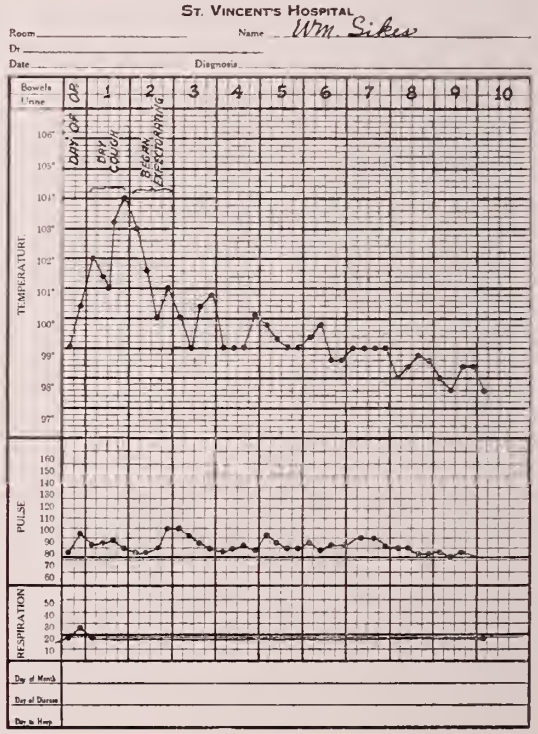


Fig. 2 (case 1).—The temperature chart indicates that the febrile reaction in this case was no more severe than that which may normally be expected following ureterolithotomy.

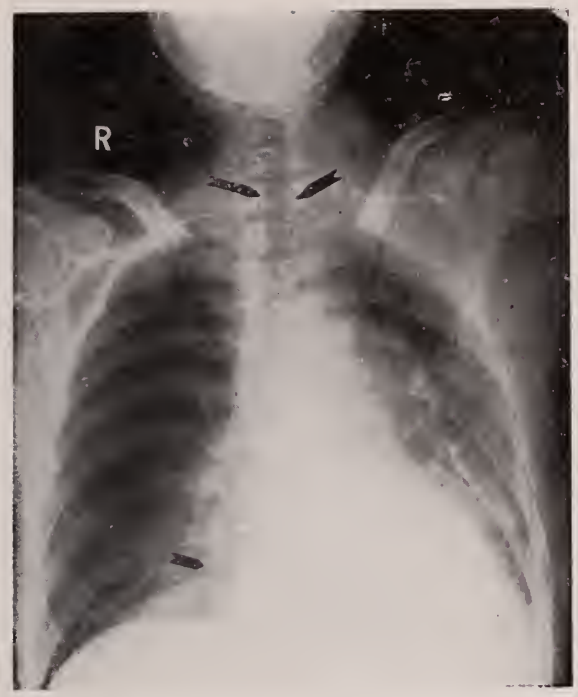


Fig. 3 (case 2).—Roentgenogram showing atelectasis on the left side. This roentgenogram was taken on the third postoperative day.

A slight cough developed on the morning of the second postoperative day, and on the following day roentgen examination (fig. 3) demonstrated the presence of atelectasis in the left lung. The patient was clinically well on the sixth postoperative day and was discharged from the hospital on the sixteenth postoperative day. The temperature chart is shown in figure 4.

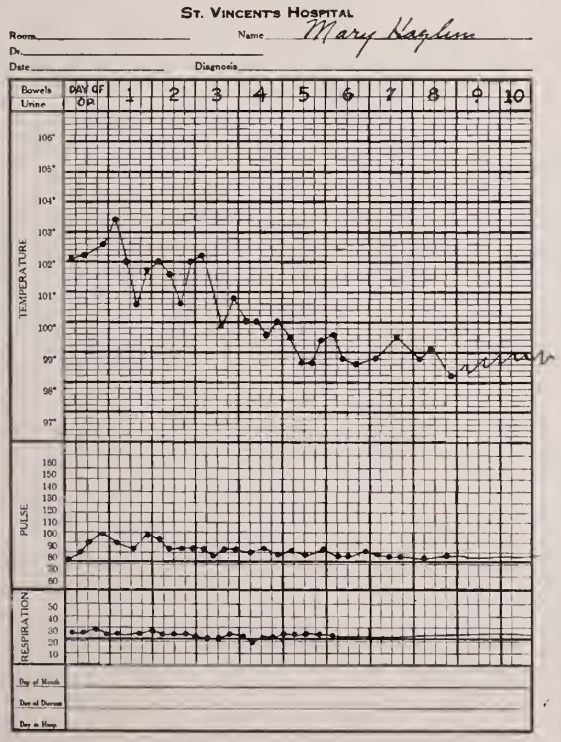


Fig. 4 (case 2).—The temperature chart in this case demonstrates a febrile reaction within normal limits, as does the chart in case 1 (fig. 2).

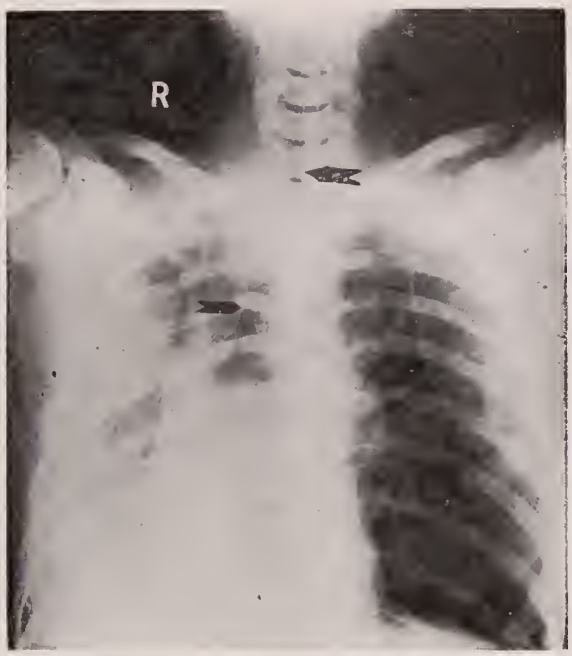


Fig. 5 (case 3).—Roentgenogram showing atelectasis on the right side. This roentgenogram was taken on the third postoperative day.

Case 3.—L. W., a white woman aged 42, was admitted to the hospital with hydronephrosis of the left kidney caused by ureteropelvic obstruction. Atropine was administered preoperatively, and anesthesia was produced by the use of avertin and gas. Pyeloplasty, nephrostomy and nephropexy were performed, the operation requiring one hour and forty minutes.

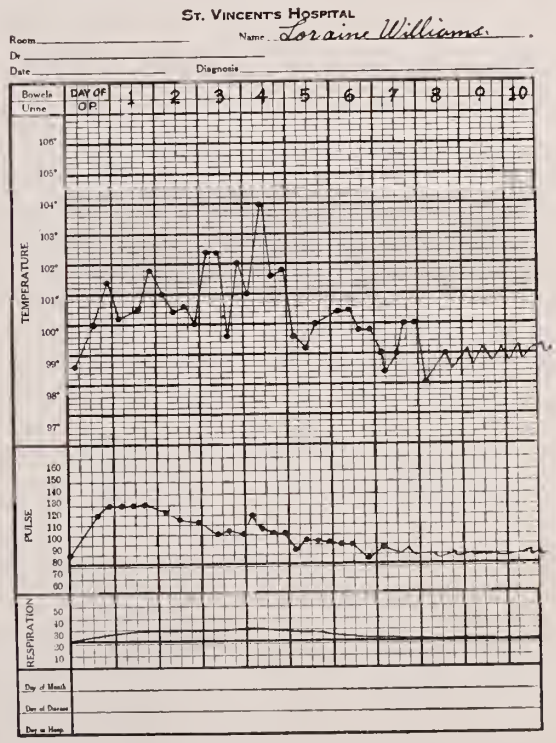


Fig. 6 (case 3).—The elevation of temperature indicated in this temperature chart occurred on the fourth postoperative day and could not be explained by urologic findings. It was probably referable to the chest.

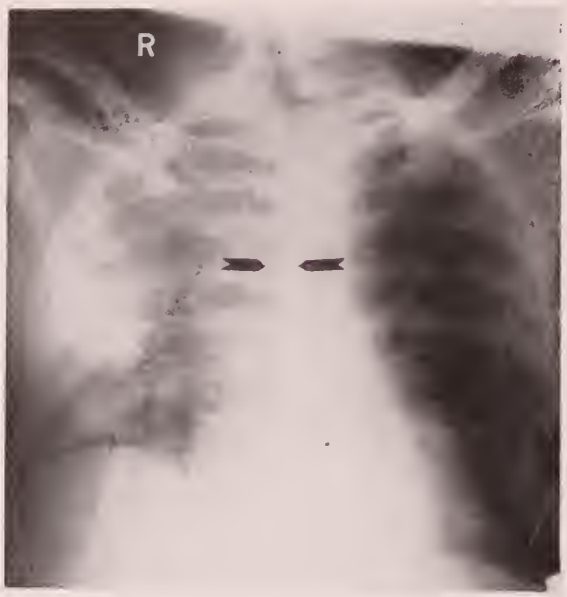


Fig. 7 (case 4).—Roentgenogram showing atelectasis on the right side. This roentgenogram was taken on the third postoperative day.

On the third postoperative day a slight cough developed, and the patient complained of pain in the right side of the chest. Roentgen examination demonstrated atelectasis of the right lung (fig. 5). The respiratory rate was increased, but cyanosis was not observed. There was an elevation of temperature on the following day that could not be explained urologically (fig. 6). The condition had cleared up by the sixth postoperative day, and the patient was discharged from the hospital four days later.

Case 4.—J. H., a white man aged 58, entered the hospital for an operation because of nephrolithiasis of the left kidney. Atropine was administered preoperatively, and avertin and gas were used to produce anesthesia. The operating time was one hour and ten minutes.



Fig. 8 (case 4). Roentgenogram showing atelectasis with developing bronchial pneumonia. This roentgenogram was taken on the fifth postoperative day.

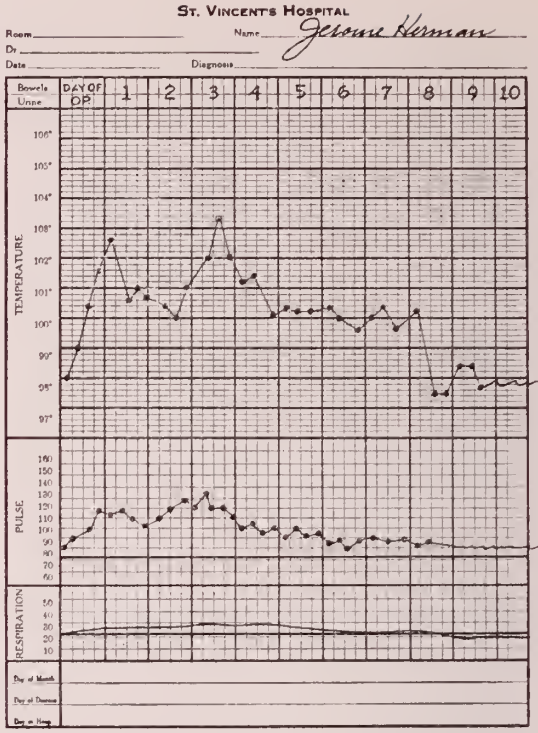


Fig. 9 (case 4).—The second rise of temperature shown in this temperature chart was probably due to a developing pneumonia.

Dyspnea and cyanosis were present on the third postoperative day, and the respiratory rate was increased to 30. Atelectasis of the right lung was demonstrated roentgenologically (fig. 7). Treatment was started immediately, but expectoration was not free. Roentgen examination two days later (fig. 8) gave evidence of a secondary bronchial pneumonia. The second elevation of temperature (fig. 9) probably coincided with this pneumonic development.

Case 5.—M. M., a white woman aged 47, was subjected to pyeloplasty and nephrostomy because of hydronephrosis of the right kidney due to ureteropelvic obstruction. Anesthesia was produced by the use of avertin and gas, and atropine was administered preoperatively. The operation was completed in one hour and two minutes.

The postoperative course was rather stormy, and pathologic changes referable to the chest were not noted until the fifth postoperative day when cyanosis and dyspnea were present. The patient had, however, complained of slight pain in the chest on the second postoperative day according to the nurse's record on the chart. Atelectasis of the left lung and some cloudiness of the right lung were demonstrated roentgenologically (fig. 10). The temperature, which had risen to 103 F. before subsiding, now reached an elevation of 102 F. (fig. 11) and remained at or near this level for the next ten days. The patient was placed under an oxygen tent and was kept there until the fourteenth postoperative day.

Roentgen studies of the lungs, made five days after the first roentgen examination, show that the atelectasis had disappeared from the left lung, but pneumonia was present in the right lung (fig. 12). The patient was discharged from the hospital on the twenty-fourth postoperative day.

To combat atelectasis the following regulations are now observed in this clinic:



Fig. 10 (case 5).—Roentgenogram showing atelectasis of the left lung and early bronchial pneumonia on the right side. This roentgenogram was taken on the fifth postoperative day.

1. Operation is postponed when a patient has mucopurulent nasal, pharyngeal or bronchial secretion.

2. Atropine is not administered preoperatively.

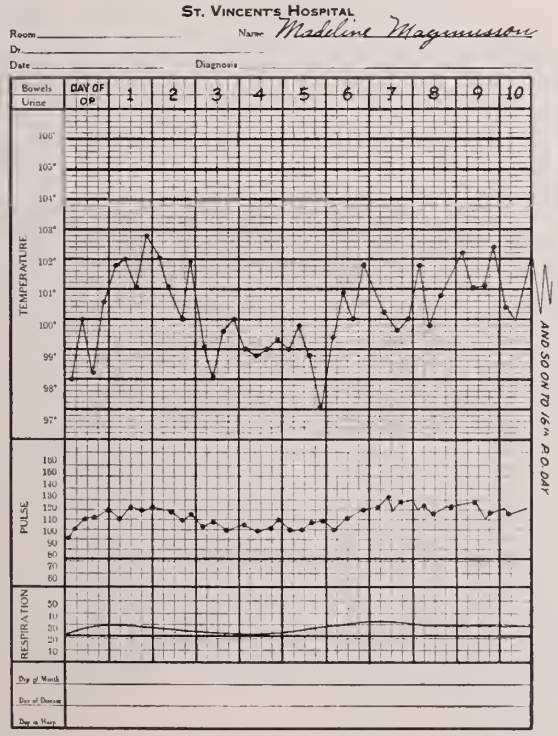


Fig. 11 (case 5).—As in case 4 (fig. 9), the second elevation of temperature in this case, as shown in this temperature chart, was doubtless due to the presence of pneumonia. It persisted until the sixteenth postoperative day.



Fig. 12 (case 5).—Roentgenogram showing the left lung clearing and demonstrating the presence of pneumonia on the right side. This roentgenogram was taken on the tenth postoperative day.

3. Only mild preoperative sedation with barbiturates is given.

4. Hyperventilation is carried out as the operation is finished.

5. Hyperventilation is continued at regular intervals in the patient's room for the first twenty-four hours after the operation.

6. The patient is placed on the side on which the operation was performed as often and as long as is consistent with comfort.

7. Routine daily examination of the chest is made postoperatively.

CONCLUSIONS

The etiology of atelectasis is discussed together with the theoretic conditions from which an atelectatic state may develop.

Five cases are reported in which atelectasis occurred postoperatively following renal and ureteral surgery. In 2 cases pneumonia was a complication.

The treatment of this condition is presented.

Preventive measures are suggested.

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WOUNDS OF THE ABDOMEN

J. W. SNYDER, M. D.
MIAMI

Wounds of the abdomen tend to enliven and broaden surgical experience in most staff services. Usually in cases of this type the patient enters the hospital at midnight or later, when consultants are not available, and the unfortunate surgeon on duty must take full responsibility as to proper procedures, including roentgen interpretation, and then proceed to remedy the damage to the best of his ability. In view of the high attendant mortality, wounds of the abdomen do not look well statistically and are not welcomed with much enthusiasm by the service. Members of the staff of the Jackson Memorial Hospital have gathered the records of all available cases observed there over a ten year period, and a review of these cases is presented here as a basis for various conclusions.

Preceding the first World War military wounds were considered to be largely those of high speed small caliber bullets with small wounds of entrance and exit, which remained clean and healed readily. Civil experience had borne out this conception, but with the advent of the first World War an entirely new factor rapidly changed the picture. The high explosive shell tore and shattered tissue to an extent never before experienced and this, combined with a soil heavily contaminated with all types of organisms, produced wounds so foul and gangrenous that the medical service was for a time at a loss to know how to handle the problem.

Now, again, in the second World War surgeons must contend with new factors, the effects of which are most devastating. Judging from the reports of our English colleagues the large aerial bomb has produced a blasting effect never before seen, with a disintegration of tissue in mass. Furthermore, the increased use of the incendiary bullet with its burning effect has added greatly to the destruction and necrosis of tissue. In short, abdominal destruction tends to be so extensive that, as stated by Gordon-Taylor, "abdominal casualties in Britain at least, able to repay surgical aid are in truth infrequent." For these reasons any consideration of wounds of the abdomen received in civil life has only a casual relation to those encountered in military practice.

Read before the Sixty-Ninth Annual Meeting of the Florida Medical Association, held in Hollywood, April 13, 14 and 15, 1942.

Drs. Fleming and McClamroch collected the records of penetrating gunshot wounds of the abdomen treated at the hospital from January 1932 to October 1941, and from their report I shall quote freely.

TABLE 1

		Lived	*Died*	*Mortality Percentage*
Total cases	126	64	62	49.2%
Operated on	111	59	52	46.8%
Not operated on	15	5	10	66.6%

There were 126 cases in all. One hundred and eleven patients were operated on, with a mortality of 46.8 per cent. Ten were dying and, therefore, were not operated on; 5 with apparent penetration of the liver alone were not operated on, and all 5 recovered. The average reported mortality for gunshot wounds of the abdomen is 60 per cent; so we have a certain pride in the record even though 46.8 per cent is a tremendous mortality.

Again quoting from the report of Fleming and McClamroch, "of the one hundred and eleven operated cases there were one hundred and seven with visceral perforations. The total number of perforations was 486, or an average of 4.3 perforations per case."

TABLE 2.—VISCERAL PERFORATIONS

	No. Cases	*Lived*	*Died*	*Mortality Percentage*
Liver	18	12	6	33%
Small intestine	29	13	16	55%
Stomach	6	3	3	50%
Large intestine	8	2	6	75%
Multiple viscera	41	21	20	49%
Other viscera	5	4	1	20%
Total	107	55	52	48.6%

By far the largest number of perforations were of the small intestine, 251 in all, with the large intestine next in order with 76 perforations. By an endeavor to evaluate the risk involved it was shown that in this series perforation of the liver carried the lowest mortality, 33 per cent. Perforation of the stomach was next with a 50 per cent mortality, that of the small bowel followed with a 55 per cent mortality, and perforation of the colon carried the highest rate of 75 per cent.

While we should like to feel that all violence occurred across the tracks among the colored people, the ratio of colored to white was only 2 to 1. Men were three times as frequently involved as women.

In contrast to the mortality mentioned, during the same ten year period 55 patients with stab wounds of the abdomen were admitted, all of

whom were operated on, with but 6 deaths occurring. The explanation for this lower mortality was the relatively superficial extent of the damage inflicted by a knife. Often in these cases, although evisceration was present with protruding bowel or omentum, no visceral perforation could be found, and hemorrhage tended to be moderate rather than massive. The greatest risk seemed to be that of contamination and infection resulting from the evisceration.

It may be stated as a rule that in all cases of penetrating wounds of the abdomen the patient should be operated on at the earliest possible moment. In this series of cases of gunshot wounds the time element was important. Surgical procedures within the first two hours resulted in a 39 per cent mortality while operation during the third hour produced a mortality of 43.7 per cent and beyond three hours the death rate increased to 55.5 per cent.

Penetrating wounds first seen from thirty-six to forty-eight hours after injury, if obviously improving, are probably best left alone as nature may handle the situation perfectly. A second exception pertains to abdominal wounds inflicted by a shotgun with fine shot and at a distance. Willis showed that small perforations of the bowel seldom result in leakage of intestinal contents, while manipulation of the bowel seeking such minute defects almost universally results in the escape of intestinal contents with a resultant peritonitis. A shotgun discharged at close range, however, is an entirely different matter as the effect is that of a mass projectile with explosive effect and most of the victims will die within twenty-four hours regardless of treatment.

Promptness of action does not mean carelessness. A brief history of the accident, with all obtainable data as to the method and type of injury should be obtained if possible. At the same time shock can be combated, and the patient made comfortable with narcotics. A catheterized or voided specimen should be obtained for urinalysis, a blood count should be made, and blood grouping for transfusion should be determined. A careful physical survey should be made with examination for injuries other than abdominal. If the course of the bullet is evident, the probable structures involved and the extent of injury may be surmised. If the course is not clear, a roentgenogram may disclose the location of the projectile together with free air as evidence of visceral injury. It may be accepted that although various organs move with respiration and peristalsis in the path of a bullet, the projectile itself tends to follow a straight line in its passage.

The immediate fate of a patient depends largely upon the extent of intraabdominal hemorrhage. If a major vessel is severed, death will occur before surgical measures are possible. Hemorrhage from wounds about the pancreas and kidneys adds immeasurably to the mortality. Bleeding from the pancreas may be checked by suture or pack, but never with much satisfaction. Retroperitoneal hematomas are best left alone unless continued bleeding necessitates exploring the hematoma in the hope of finding and ligating the bleeding vessel. With laceration of either kidney there is apt to be considerable bleeding, but if there is no escape of blood into the abdomen or to the outside, the bleeding will usually become arrested short of a fatality by pressure of the surrounding organs.

Sharp hemorrhage may occur from a severed mesenteric vessel, and the loss of blood may be great as there is little tendency for the blood to clot in the peritoneal cavity. Fortunately, the bleeding point is usually accessible, and the bleeding is readily controlled, and unless loss of the vessel devitalizes a segment of the intestine, little damage is done.

Hemorrhage from the liver and spleen may also be severe. The blood pressure in the spleen is arterial, and the bleeding which occurs is sharp and profuse, necessitating, as a rule, splenectomy to control the hemorrhage. In the liver, by contrast, the blood pressure is low, and the bleeding can be controlled by slight local pressure. Various methods of handling a traumatized liver have been suggested. Suture, if possible, is the best. Otherwise tamponade, with bits of muscle or gauze packing, must be employed.

Two particular dangers in extensive destruction are those of biliary peritonitis and disintegrating bits of liver free in the peritoneal cavity. In 5 cases of this series, as previously stated, in which it was believed the liver alone was perforated, no operation was performed, and all of the patients recovered.

The second greatest danger to that of hemorrhage is infection, and particularly peritonitis. Perforation of a viscus should be considered in all penetrating abdominal wounds. If the course of the bullet is known, the organ or organs penetrated may be inferred, and careful exploration

of at least that portion of the abdomen to discover all possible perforations should be carried out. Usually this calls for a survey of the small bowel from the duodenal-jejunal junction to the cecum, and a meticulous examination of the colon for at least part of its course.

Wounds of the upper part of the abdomen necessitate a similar examination of the stomach while wounds lower in the abdomen necessitate examination of the pelvis with particular reference to the bladder and rectum. Simple suture that does not constrict the bowel is the preferable procedure in intestinal perforation. If there are several perforations in close proximity, or if the vitality of a segment of bowel is in question, resection may be considered or may be necessary, but it adds considerably to the risk. If a small hematoma is found back of the descending colon, it usually means a retroperitoneal perforation of the colon, which, if not corrected, is almost inevitably fatal. Here, the preferable procedure is to free the colon along its lateral peritoneal attachment, roll it inward and identify and close the perforation, after which the area of the hematoma should be drained laterally and extraperitoneally if possible. Many patients are lost by reason of retroperitoneal abscess with the peritoneal cavity remaining clean, or becoming clean, because of a resistance superior to that of the retroperitoneal tissues.

As noted from the cases previously cited, wounds of the stomach, duodenum and upper portion of the gastrointestinal tract carry a better prognosis than those of the ileum and colon. Unfortunately, many cases have come to autopsy, as noted by Oberhelman and Le Count, with perforations overlooked in the surgical survey of the abdomen. All surgical procedures should be rapid and accurate. Although most wounds can be closed without drainage, I personally am of the opinion that some should be drained, particularly those with perforation of the colon.

Anesthesia must be adequate, with complete relaxation of the abdomen, for nothing adds to the coronary sclerosis of the surgeon more than trying to retain intestines within the abdomen of a rigid or struggling patient. The choice of the anesthetist, if choice is possible, is more important than the choice of the anesthetic.

It must be remembered that all wounds of the abdomen do not present a point of penetration in either the abdomen or the back. Some of the most serious wounds have a point of entrance through the buttock or through the chest. Here it is that determination of the path of the bullet is most important, as determined by the point of entrance and exit, by the history of just how the injury was received, or by roentgen localization of the projectile.

The symptoms of abdominal injury are most important in arousing suspicion. Abdominal pain and muscular rigidity tend to focus attention on the abdominal cavity. Early irritation and a rigid abdomen occur with perforation of the stomach and upper portion of the intestine; the contents of the lower part of the bowel are, on the other hand, less irritating and may not produce early rigidity, but instead late spasm and muscular resistance as a result of peritonitis. The diaphragm may readily be perforated or ruptured in wounds of the thorax. If the left side of the chest is involved, the stomach is not apt to escape injury, and a diaphragmatic hernia may also result. If the right side of the chest is involved, injury of the liver may occur through the diaphragm, and if no other structures are involved, a minor injury of the liver carries a relatively good prognosis. Furthermore, a diaphragmatic hernia does not occur on the right side because the size of the liver prevents passage through any defect in the diaphragm.

Patients are often admitted unconscious and in a state of collapse. It is advisable to treat patients in this condition for shock, but not over too long a period since the cause of death is apt to be hemorrhage and it is wise to determine what is occurring within the abdomen rather than to wait and see what will happen. One should not forget that the treatment for loss of blood is its replacement by fresh blood rather than the further washing out of blood vessels by saline solution. Furthermore, a fall in blood pressure may be essentially conservative in checking hemorrhage.

Following the operation, in which all measures possible have been employed to control bleeding and repair damage, active measures should be taken to combat shock and loss of blood. Repeated transfusions and the administration of fluids parenterally are the most effective measures, and these, together with sedation and the application of local heat to the body, constitute the usual supportive measures employed.

The stomach should be continuously decompressed for days, and nothing should be given by

mouth or bowel until the danger of peritonitis or intestinal leakage is safely past. This period varies from four to eight days. It has been our experience that if the abdomen is left severely alone and intestinal peristalsis is not stimulated by either food or enemas, nature will be most kind in handling difficult situations.

In this series of cases of gunshot wounds of the abdomen 61 per cent of the mortality was attributed to shock and hemorrhage, and 19 per cent to peritonitis. Pneumonia, embolism, empyema, intestinal obstruction and various other causes made up the remaining 20 per cent. In only 1 case was the possible cause of death found to be due to an overlooked perforation. Among the patients in the 55 cases of stab wounds of the abdomen in this ten year period, there were, as previously stated, 6 deaths. In most cases the abdominal wound was but one of several wounds received by the patient; other wounds were commonly of the chest, arms and shoulders. Only 1 patient suffering from a stab wound died of peritonitis, and 5 died of hemorrhage and shock. Interestingly enough, the mortality rate in these cases of stab wounds of the abdomen was approximately one half that normally expected.

Again, during this ten year period there were 22 patients with severe nonpenetrating wounds of the abdomen admitted to the hospital and of this number 14 died, a mortality rate of approximately 64 per cent. In cases of this type indications for surgical intervention are not clear, and accurate diagnosis is the major problem. A speedy appraisal of the damage sustained and of the necessity for exploration often determines the fate of the person injured in this way.

While an exploratory laparotomy should not be undertaken lightly, procrastination can, however, be most disastrous. In the present series there were 10 cases in which rupture of the spleen occurred. In 4 of these cases no operation was performed, either because the patient was in a state of collapse or because the lesion was not suspected. All 4 of the patients died, while of the 6 patients who were operated on 3 recovered.

Unfortunately, there is a peritoneal syndrome with boardlike rigidity of the abdomen, diffuse tenderness and absence of peristalsis, all combined with a state of shock. The clinical picture suggests severe visceral injury with hemorrhage, yet all these symptoms may be produced by a blow over the celiac plexus, by injury to the back or chest with referred abdominal signs, by retroperitoneal hemorrhage, or by minor lacerations or injuries of the abdominal organs. During the period of treatment of shock the abdominal symptoms of this syndrome may diminish greatly and the necessity for a laparotomy disappear. So definitely is this probable course understood that only the exceptional case is subjected to the added insult and risk of an exploratory operation.

By contrast, when an exploration is required, the necessity may not be apparent, and a delay in reaching the proper diagnosis may prove fatal. For this reason it is undoubtedly better to open an abdomen on suspicion, with occasional negative findings resulting, than to open it on a certainty with an inevitably higher mortality.

The roentgen evidence of free air in the peritoneal cavity, or the presence of free fluid in the abdomen is a definite sign of visceral damage, and while blood in the urine commonly means injury of the kidney, the possibility of a perforation of the bladder should not be overlooked. When a blow is received on the abdomen, the organs immediately beneath the point of impact tend to be injured. A distended stomach or bowel is more likely to be ruptured than one that is empty, and points of fixation, as at the duodenal-jejunal angle and the terminal portion of the ileum, are more susceptible to injury. Again, the force of the blow may be carried over to some organ less able to withstand compression. The right lobe of the liver is frequently injured by crushing blows of the upper part of the abdomen. Local or circumscribed blows more commonly injure the intestine, whereas a diffuse application of force to the abdomen is more likely to result in damage to the liver or spleen. Pain is a significant symptom. The type of pain, whether localized and persistent or spreading from leakage, is an important danger signal. Unusual dulness suggests hemorrhage while shifting dulness bespeaks a massive hemorrhage.

Of the several organs affected by indirect violence the spleen is the most commonly injured. A blow over the left side of the abdomen or back, or a blow even somewhat remote from the splenic area, may produce a ruptured spleen. Abdominal pain frequently referred to the left shoulder, with nausea, weakness and shock, with an increased area of splenic dulness, an increasing pulse rate, a falling erythrocyte count and a rising leukocyte count all speak for hemorrhage and a ruptured spleen. Estes briefly summarized the problem with this observation, "Following abdominal

trauma, acute pain and tenderness in the upper left abdomen and shoulder, with symptoms of hemorrhage, is sufficient to justify a diagnosis of rupture of the spleen."

After the treatment of shock, preferably by transfusion, a splenectomy should be done as speedily as possible. Intraperitoneal blood may sometimes be saved and reinfused into a vein after citrate has been added. The mortality depends upon the extent of the hemorrhage, an early properly timed operation and the severity of associated lesions.

Injury to the liver is a frequent result of abdominal trauma, or indirect force as in a fall from a height with the patient landing on his feet. The right lobe of the liver, because of its size, is the usual site of rupture. Large ruptures are rapidly fatal. Biliary peritonitis may be a second mortality factor in addition to hemorrhage. The presence of pain in the upper portion of the abdomen on the right side sometimes referred to the shoulder, with tenderness, rigidity and signs of hemorrhage tends to indicate a rupture or laceration of the liver, and roentgen examination may demonstrate an elevation of the diaphragm by an accumulation of extravasated blood. As previously noted, the vascular pressure in the liver is low, and hemorrhage may cease spontaneously. On exploration, if there is still bleeding of the liver, this may be temporarily arrested by digital compression of the hepatic artery and portal vein at the foramen of Winslow while the rupture is being sutured or controlled by a pack. If, however, the bleeding has ceased, it is wise to leave the occluding clot undisturbed, as sharp hemorrhage may result if the clot is removed. Drainage should be instituted to facilitate the escape of bile from lacerated bile ducts.

The cardinal features of injury to the kidney are a history of trauma, pain and hematuria, accompanied by nausea and vomiting. Renal colic, caused by the passage of clots, localized tenderness and rigidity are present in varying degree. Later a hematoma in the flank may be palpated. Indications for surgical treatment are progressive hemorrhage and extravasation of urine, infection, or intraperitoneal hemorrhage. As a rule in most cases of trauma to the kidney the patient escapes surgery.

Rupture of the bladder may be of intraperitoneal or extraperitoneal origin. Bloody urine or blood with little urine suggests the diagnosis which should be made, and treatment should be instituted before symptoms of peritonitis or extravasation of urine becomes evident. Cystoscopy is rarely needed for diagnosis. Measured air or fluid introduced through a catheter into the bladder, together with roentgen examination of the abdomen and pelvis will usually make the diagnosis obvious.

Rupture of the stomach and duodenum is rare. The second portion of the duodenum sometimes ruptures posteriorly into the retroperitoneal tissues as a result of a direct blow, or at the site of a preexisting ulcer. Elsewhere rupture may occur at any point along the gastrointestinal tract. A direct blow over a hernia has frequently produced a rupture of the portion of the intestine enclosed within the hernial sac. Visualization by roentgenogram of a collection of gas beneath the diaphragm is diagnostic of rupture of the gastrointestinal tract, but its absence does not exclude rupture. Surgical treatment should be instituted early, based on positive findings or a healthy suspicion in the face of continued pain and rigidity. It is needless to state that a methodical examination of the entire abdomen should be made at operation.

In one-half of the cases of nonpenetrating wounds of the abdomen included in this series the automobile was the causative factor. Two injuries were received in playing baseball, while other causes varied from a block of wood thrown from a buzz saw to a fistic encounter with a friend.

TABLE 3.—NONPENETRATING WOUNDS

Injury to	*No. Cases*	*Operated*	*Not Operated*	*Died*	*Recovered*
Spleen	10	6		3	3
			1	4	
Urethra (rupture)	1	1		1	
Bladder (rupture)	2	2			2
Stomach (rupture)	2	1		1	
			1	1	
Mesentery (tear)	1	1			1
Liver	1		1	1	
Kidney	1	1		1	
Pancreas	1	1			1
Bowel (rupture)	3	2		2	
		1			1
Total	22	16	6	14	8

It must be noted that the injuries seldom were single as the liver and kidney were often injured at the same time, or the spleen, kidney and lung, or, as in one case, the spleen, the liver and left lung all suffered damage from the injury. There were 10 cases of ruptured spleen in 4 of which the patient was not operated on either be-

cause of speedy exodus on admission to the hospital or failure to diagnose the condition. All 4 cases terminated fatally. In the 6 cases in which an operation was performed, 3 patients recovered. In 1 case of ruptured urethra with prompt operation the patient failed to recover largely because of injury of the brain. Two patients with a ruptured bladder were operated on and they recovered. In 1 of 2 cases of rupture of the stomach the patient was operated on and in the other operation was not undertaken by reason of shock; both patients died.

One patient with a mesenteric tear was operated on and recovered. One severe injury of the liver, a condition never operable, resulted in the death of the patient shortly after admission. In 1 case of lacerated kidney the patient was operated on and died rather unexpectedly. Contusion of the pancreas resulted in a pancreatic cyst in one instance; the patient was operated on and recovered. Of 3 patients with a ruptured intestine, all of whom were operated on, but one recovered. We are not particularly proud of this group since the mortality rate of 64 per cent leaves much to be desired.

Lastly, we endeavored to separate those cases in which sulfanilamide or one of the sulfa group of drugs was employed to prevent infection or peritonitis from the group in which such drugs were not employed. Unfortunately, we found the number of cases too small to warrant the drawing of conclusions. Our impressions, however, of the value of the sulfonamides for this purpose are most encouraging, so much so that peritoneal contamination and peritonitis are no longer viewed as hopelessly fatal sequelae.

After Pearl Harbor the Medical Service of the Army reported that no massive infections were observed ten days after the wounded men had been treated, not even among those whose wounds had been contaminated with the fertilizer-contaminated soil of Hickman and Wheeler Fields, nor among those who had not had their wounds debrided during the first twenty-four hours. Infection, which in the first World War killed 80 per cent of the men with abdominal wounds alone, hardly occurred in Hawaii. Apparently, in these troubled times, all may at least be thankful for the sulfa drugs, which in the future should materially reduce the mortality in cases of wounds of the abdomen.

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402 Huntington Bldg.

DISCUSSION

Dr. J. M. McClamroch, Miami: On hearing this paper I think one is immediately impressed by two factors, first, Dr. Snyder's thoroughness of treatment of the subject and, second, its timeliness. All surgeons will surely see many more traumatic abdomens with the present war situation than ever before.

We should remember that the destructive force of an object increases with speed tremendously. For example, an object going 200 miles an hour causes four times the damage of one going 100 miles an hour; one going 300 miles an hour causes nine times the damage of one going 100 miles an hour. That is, the force of a moving object increases as the square of its speed. War injuries, therefore, may be expected to be particularly destructive in nature because of increased speeds.

There is, necessarily, an irreducible minimum in mortality of abdominal wounds because of massive hemorrhage and destruction of tissue. As Dr. Snyder has brought out, however, there are many controllable factors which will influence the mortality. The importance of the use of plasma and blood immediately when there is a question of intraabdominal trauma cannot be overemphasized.

Dr. Snyder has mentioned most of the diagnostic signs of visceral trauma and intraabdominal hemorrhage. Examination of the abdomen for shifting dulness for determination of hemorrhage is not too reliable since it takes about a liter of blood to cause shifting dulness in the average abdomen. Frequent hematocrit determinations are of great value in determining the reduction of blood volume.

In diagnosis, roentgen examination should not be leaned upon too heavily since multiple intestinal per-

forations can be present with no demonstrable free air. As for anesthesia, I believe spinal anesthesia should be condemned for two reasons, first, because of the possibility of increasing shock and, second, because of the possibility of increasing the tone of the intestine and pushing its contents through a perforation.

In regard to exploration, speed is surely important, but not nearly as important as completeness. The autopsy reports of overlooked perforations in more than half of 169 fatal cases of gunshot wounds of the abdomen in one hospital series is mute evidence of the necessity for a meticulous exploration.

The use of sulfathiazole intraabdominally in contaminated cases is apparently reducing the mortality appreciably.

In postoperative care we might reemphasize the importance of watching for secondary hemorrhage and shock and stress the use of Wangensteen suction to combat ileus, the employment of adequate sedation and the use of sulfa drugs when indicated.

THE USE OF VITAMIN K IN OBSTETRICS

HAROLD G. NIX, M. D.
TAMPA

Until the discovery of vitamin K, no fundamental knowledge was available regarding the pathologic physiology involved in the production of an abnormal tendency to bleeding in a small percentage of newborn children. The knowledge that this condition is a deficiency disease has made possible the prevention of its occurrence. By preventing the various manifestations of hemorrhagic disease, the incidence of mental and physical deformities resulting from the trauma of birth should be greatly reduced.

In 1929, Dam discovered that in chicks fed on a diet with certain deficiencies there developed a tendency to spontaneous bleeding with an associated prolonged clotting time and lowered plasma prothrombin. He and his co-workers suggested that this condition was a deficiency disease due to the exclusion from the diet of a certain antihemorrhagic factor which he termed vitamin K. This factor was found to be fat soluble and present in large amounts in alfalfa meal. Almquist and his associates a short time later developed a method of concentrating this antihemorrhagic factor and were successful in isolating a pure crystalline substance of vitamin K. Since that time various synthetic compounds, derivatives of the naphthol group have been introduced and they show an antihemorrhagic activity. These compounds possess a clotting activity several times that of the natural vitamin K and may be administered either orally or intravenously without the occurrence of untoward reactions.

Read before the Sixty-Ninth Annual Meeting of the Florida Medical Association, held at Hollywood, Apr. 13, 14 and 15, 1942.

The plasma prothrombin in the average newborn child at birth is approximately 70 per cent that of the normal adult and it descends below this level from the second to the fifth day of life. In a percentage of the babies this level falls so low that spontaneous hemorrhage is likely to occur. In at least 50 per cent of the newborn infants when the prothrombin activity falls below 35 per cent of normal, some manifestation of hemorrhagic disease will be the result. The explanation for this physiologic descent in prothrombin activity is the inability of the liver in the newborn to accumulate sufficient vitamin K to maintain a normal production of prothrombin. The incidence of hemorrhagic disease, as reported by different clinics, varies from 2 to 10 per cent.

Plass and his workers determined the basic requirements of vitamin K for the maintenance of a normal prothrombin level as approximately 20 micrograms daily when it is administered in divided doses. A single dose of 1 mg., administered intravenously to the mother during labor, will, however, stabilize the prothrombin level of the newborn through the sixth day of life. As a result of these findings, the concensus among investigators in this field is that a single dose of 2 mg. of synthetic vitamin K should be given intravenously.

Several rather extensive studies of the clinical use of vitamin K have been reported in the last two years. Beck and his associates made a study of 2,000 cases in which every other patient admitted in labor was given vitamin K prior to delivery, and the alternate patients were used as controls. The incidence of hemorrhagic disease in the 1,000 cases in which the patient received vitamin K during labor was .5 per cent, whereas in the cases used as controls some manifestation of this disease was present in 2 per cent. In this study 2 mg. of thyloquinone was administered by mouth to alternate mothers during labor, and thereby the incidence of this disease was reduced by approximately 75 per cent. Hellman, Shettles and Eastman recently reported a study of this problem and concluded that the administration of vitamin K to the mother during labor produced a higher prothrombin level in the newborn infant than the administration of this substance to the baby after birth. They were of the opinion that small hemorrhages occurring during labor would continue to ooze for a number of days if a hypoprothrombinemia were present. For this reason these authors believed that the life of many in-

fants can be saved by producing better properties of blood coagulation during the progress of labor. The neonatal mortality from all causes was 4.1 per cent in the control series as compared with a mortality of 1.5 per cent in the series in which vitamin K had been given. The infant death rate among the patients in the control series was accordingly 2.7 times that of the group to which vitamin K had been administered. In a study of these infants at autopsy, an interesting fact was observed; in only 1 of the 6 dead infants whose mothers had received vitamin K was there any evidence of hemorrhage. This infant had been delivered by breech extraction, and a large subtentorial tear was found. In the control series hemorrhage into one or another organ was demonstrable at necropsy in 56 per cent of the cases. A retinoscopic examination of the newborn in this series revealed retinal hemorrhages in 32 per cent of the untreated cases and in only 16 per cent of those which had been treated prophylactically with vitamin K. Waddell and Guerry treated over 1,800 patients in labor with vitamin K without the occurrence of a single instance of hemorrhagic disease. They reported that the incidence of intracranial hemorrhage has been reduced at least two thirds by the administration of vitamin K.

I have been using vitamin K intravenously in my private practice for the past year and have had no evidence of hemorrhagic disease to date. I have observed that the patient is much more likely to receive her medication if its administration is included in the routine admission orders.

It is my opinion after completely reviewing the literature on the subect, that we who are doing obstetrics have an additional method of lowering the fetal mortality. The expense involved is only a few cents per patient and should not be a deterring factor. I think everyone is in agreement that the use of vitamin K will have little or no effect in the more extensive intracranial hemorrhages due to trauma, but I believe that the routine use of this preparation during labor will considerably reduce the fetal mortality and morbidity resulting from minor hemorrhages which continue to ooze and produce extensive damage.

The advisable practice, in my opinion, is to administer 2 mg. of vitamin K intravenously with the onset of labor and repeat the dose at intervals of from eight to twelve hours in cases of prolonged labor. In cases of premature labor it is advisable to administer the doses every four hours because of the greater incidence of hemorrhagic disease among premature infants. If delivery should occur less than three hours after administration of vitamin K, a similar dose should be given intramuscularly to the baby to assure an adequate prothrombin activity.

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DISCUSSION

Dr. Randolph Perdue, Miami: I want to thank Dr. Nix for bringing forward an important subject in such good form. We members of the Association need to know as much as possible about such things in order to establish our own routine practice.

My first contact with the use of vitamin K was in June 1940 at the meeting of the American Medical Association when Dr. Waddell read his paper on this work. He presented one graph which I should like to mention. He had made a study of the records at the University of Virginia Hospital and reported the incidence of prothrombin deficiency in the newborn. His chart showed the number of babies who had hemorrhagic disease. There was a distinct rise in the spring of the year. He also studied a large group of babies with a spastic condition. In this group also there was a distinct "spring of the year" rise corresponding with the other curves. In both instances the increase in incidence coincided with the time of the year when vitamin K was lacking in the diet of the mothers. In his group of controlled cases there was no such seasonal variation. That is a significant finding and, to my mind, proves that hemorrhagic disease of the newborn is a deficiency disease.

All of my experience with vitamin K has been since that time. Unfortunately I have not used it throughout the whole time, but it did provide protection when it was used. In 174 consecutive cases vitamin K was given immediately after birth. A few mothers received it beforehand. There were 3 fatal cases in this group, and all came to autopsy. In 1 there was evidence of hemorrhage which was extradural (cephalhematoma), and there was some question in my mind as to whether or not this death was due to hemorrhagic disease. The corrected mortality was only 0.6 per cent. I believe that in time we will be using vitamin K in all cases.

Some obstetricians are giving their patients vitamin K to take by mouth during the last few weeks of pregnancy. Others are giving it in the hospital when the patient is admitted. And still others are giving it after the baby is born. There can be no question that in some cases it should be mandatory that vitamin K be given. I think this vitamin should be given in all cases of prolonged labor. It is particularly valuable in cases of traumatic delivery. This group presents an abnormally high incidence of intracranial hemorrhage. In cases of cesarean section vitamin K should certainly be administered. All premature babies at birth should be given vitamin K. In all cases of precipitate labor it should be administered. All babies that show evidence of intracranial hemorrhage should have the advantage of this protection.

It has been known for a long time that this disease exists. It was known in ancient Egypt. The Bible records that it is unwise to circumcise a baby during the first few days of life and mentions the danger of hemorrhage.

The workers on this subject have provided a good, simple and inexpensive form of treatment to reduce the incidence of this condition. I believe it should have universal use. Dr. Nix deserves a great deal of credit for bringing this matter to our attention at this time, and I hope that vitamin K will be routinely demanded within the near future.

DR. DOROTHY D. BRAME, Orlando (read by Dr. Ruth S. Hart): I think Dr. Nix should be complimented on this excellent presentation in which he advocates the administration of vitamin K to the woman in labor. It does not come within the province of this discussion to review the facts now known concerning the necessity of vitamin K to promote the normal functioning of prothrombin. It has been definitely proved that there is a hypoprothrombinemia in a newborn infant beginning a few hours after birth and lasting until the sixth or seventh day of life. By giving the mother vitamin K this can be avoided, and many cases of hemorrhagic disease of the newborn can therefore be prevented.

The empiric use of any drug at any time might be open to criticism, but the use of vitamin K entails little expense, and it has not as yet been demonstrated that it does harm. It seems to me, therefore, that it should be given routinely in the hope of preventing the few cases of hemorrhagic disease. In addition, I should also like to stress the use of vitamin K when operative procedure is necessary on the newborn in the first week of life. Vitamin K should be given then routinely. It is because of hypoprothrombinemia that I think circumcision, for example, should be postponed until about the eighth day of life.

Again I wish to thank Dr. Nix for his paper and for the privilege of discussing it.

DR. NIX (concluding): I want to take this opportunity to thank Dr. Perdue and Dr. Brame, whose discussion Dr. Hart has kindly read, for their timely discussions of this paper and I hope that the members of the Association will adopt the policy suggested. I think we all have recently found out from reports of the fetal and maternal mortality that Florida has the highest incidence of these deaths of any state in the Union. I think the widespread use of any method that will reduce the incidence of fetal mortality as much as from 25 to 75 per cent is something well worth taking into serious consideration.

As to hypoprothrombinemia in the newborn child, so long as the prothrombin level stays within a certain range, it is, I think, of little or no significance. If the prothrombin activity is above 35 or 45 per cent of normal, there will be a normal clotting time. When the prothrombin level falls below the normal clotting time, there will be varying degrees of hemorrhage resulting in the deformities that we all see. Vitamin K is a means of protecting the children in this group.

If everyone will adopt this policy of administering vitamin K with the onset of labor, I think that the incidence of fetal mortality and morbidity can be greatly reduced.

I want to thank the Association for the privilege of presenting this paper.

Buy War Bonds

FACTORS INFLUENCING THE FORMATION OF BLEBS AFTER CORNEOSCLERAL TREPHINING

HOLLIS C. INGRAM, M.D.
ORLANDO

The prime object of this paper is to plead for flatter blebs following corneoscleral trephining. I have made an interesting and possibly important observation regarding the conjunctival flap following a common trephining operation. In a high percentage of those cases in which at operation little trouble is encountered in mobilizing the flap down to the limbus, flat blebs with good control of the intraocular tension result. When there is much trouble in freeing the flap from the eyeball, nearly all heal with a highly elevated bleb. This particular observation is even more applicable to the colored race than to the white. Keloid formation or overproduction of scar tissue is characteristic of this race. I propose to discuss the possible reasons for the formation of the flat bleb.

In noting the reasons for a difficult dissection, I have observed that invariably when the conjunctival flap does not extend down through Tenon's capsule in the original incision, much difficulty is encountered in attempting to dissect the flap down to the corneoscleral margin. On the other hand, if the original incision passes through Tenon's capsule, a great freedom of mobilization of the flap is immediately noted, even in cases in which chronic inflammation has persisted for some time prior to the operation. Less difficulty is encountered in mobilizing the flap if Tenon's capsule is included in the flap and not allowed to remain on the eyeball.

Duke-Elder stated that Tenon's capsule is fused with the bulbar conjunctival epithelium at the place of its attachment at the corneoscleral margin. This capsule is connected with the sclera by very loose connective tissue. This connection by means of loose tissue is more pronounced at the corneoscleral margin and becomes rapidly less so as the muscle attachment to the eyeball is approached. The tissue above Tenon's capsule, although loose in construction, still is far more dense than that found in the corresponding location under the capsule. In older text books it is stated, and I presume most of the ophthalmologists present were taught, that the space between

Read before the Fourth Annual Meeting of the Florida Society of Ophthalmology and Otolaryngology, Hollywood, April 12, 1942.

Tenon's capsule and the sclera is a potential lymph space allowing for a freer movement of the eyeball in its socket. This area between the sclera and Tenon's capsule gives a plane of cleavage presenting the least structures to be freed in making a movable flap. I am sure all of us have noted the freedom obtained with a conjunctival flap when the flap contains Tenon's capsule. This type of flap is used by us all at some time or other in the treatment of corneal lacerations and ulcers. In making this flap we all, consciously or unconsciously, continue dissection until we have got under Tenon's capsule and then with the simple procedure of using a strabismus hook, we mobilize the necessary flap for the particular need.

Benedict mentioned the importance of the conjunctival flap. He maintained that the absorption takes place between the conjunctiva and Tenon's capsule in the loose connective tissue or in the substantia propria layer of the conjunctiva. He also considered that Tenon's capsule terminates from 2 to 3 mm. above the corneoscleral junction. In his article he stated that the best potential drainage space is largely in the substantia propria layer of the conjunctiva and that the space between the capsule and the sclera is relatively unimportant. He concluded that adhesions between the epithelium of the conjunctiva and Tenon's capsule obstruct the flow of fluid and thereby nullify the functioning corneoscleral trephining. If adhesions between the conjunctival epithelium and Tenon's capsule obstruct the flow and since Tenon's capsule and the epithelium are adhered in the natural state, I am puzzled as to how the aqueous finds its way through this area to the substantia propria layer. This layer stops before the attachment of Tenon's capsule, placing it yet further from the corneoscleral margin.

If the absorption field is in the substantia propria layer of the conjunctiva, why is it affected by the scar in some cases and not in others? On the other hand, if the drainage area is in the space between Tenon's capsule and the sclera, then there could be a possibility of a flat bleb formation. Due to the fact that the attachment of Tenon's capsule to the sclera is very loose, there should be fewer adhesions produced in its healing process. The same is true in the abdomen and elsewhere. If the capsule is attached to the sclera at the corneoscleral margin, its attachment must be included in the flap when the cornea is split. If its attachment is 3 mm. beyond the limbus, then it would be completely freed from the eyeball and would still be firmly attached to the flap. In the latter case there would be an area of 2 mm. of flap containing only conjunctival epithelium. This area would, therefore, be exceedingly thin in comparison with the rest of the flap, and I am sure this fact would be noted at the operation. I have observed that when careful dissection has been done there is no great difference in thickness in that part immediately preceding the corneal section and the section itself. Since perfectly functioning flat blebs are seen, I am convinced that the greatest absorption of aqueous takes place beneath Tenon's capsule.

While reinforcing an old scar after previous trephining we all have experienced, at some time or other, the ease with which the conjunctiva is mobilized after the freeing of the bound-down portion at the outer border of the site of the former trephining. In these cases a highly elevated bleb is reformed. To me this is similar to surgical intervention for intestinal obstruction when the surgeon merely breaks the adhesions and makes no attempt at covering the raw areas that remain. Obstruction with new adhesions invariably recurs. I believe the same is true of the eye when a new roof has been applied to a leaking bleb following trephining. It is a well known fact that if no raw surfaces are allowed to remain after an abdominal operation the occurrence of adhesions is greatly reduced.

Gradle and others have stressed the point that an intact conjunctiva is a sufficient barrier to intraocular infection. There is always a perfect conjunctival covering to the trephined opening itself when a flat bleb is obtained.

In one case that I observed of bilateral glaucoma with high tension, corneoscleral trephining was done on both eyes. In one much trouble was encountered in mobilizing the flap. This difficulty undoubtedly was due to the chronic inflammation of the eye. On the other side no trouble was encountered in making the flap. In the case of the first eye there was an elevated bleb, and on the other a flat bleb was formed. This case caused me to begin prophesying what type of bleb I could expect following the operation. It also refocused my attention on the role Tenon's capsule plays in the formation of blebs following corneoscleral trephining. I have not yet had the opportunity of observing under the microscope

an eye on which trephining was performed many years previously with a resulting flat bleb. Of course, the study of such an eye would give an excellent opportunity to observe the lymph channels used by the aqueous in its external route from the eye.

A procedure which I have found in trephining aids immensely in the reduction of complications consists of doing a paracentesis of the anterior chamber before making the trephined opening itself. This puncture is done after the flap has been dissected and the cornea split. A cataract knife is used to make the opening, and an iris spatula is employed to release the aqueous slowly. This measure aids in lowering the tension gradually through the escape of aqueous before the opening by trephine is made. Frequently there is a too sudden reduction of tension of the eye with a sudden loss of the anterior chamber, which exerts strain on the zonules of the lens. I recall one case in particular which illustrates what can happen when the tension in an eye is reduced from a high level too rapidly. In this case the capsule of the lens near the equator protruded into the trephined opening itself. In this case the eye progressed well for four days following surgical intervention but on the fifth day pain and elevation in tension developed. The condition responded to no local treatment, and massages were ineffective. The eye was finally removed, thus giving me the opportunity of studying the cause of the nonfunctioning trephining under the microscope. When corneoscleral trephining is done on an eye with high tension and a too rapid reduction is produced, especially in elderly patients, one must expect the zonules of the lens to be stretched and frequently broken. The sudden flow of aqueous from the enlarged posterior chamber through the channel made by iridectomy and through the trephined opening in some cases will carry enlarged and elongated ciliary processes along with it. These ciliary processes can easily plug the trephined opening and nullify the operation.

SUMMARY

In summary, flat blebs give adequate drainage of the aqueous with perfect control of intraocular tension. They also give the maximum protection against intraocular infection. If Tenon's capsule is reflected with the flap and careful dissection is employed at the corneoscleral margin, flat bleb formation is obtained. A flat bleb presents the least disfiguration of an eyeball with no external bulging of the upper lid. I maintain no flat bleb is ever encountered when Tenon's capsule is not contained in the flap itself. All blebs formed following corneoscleral trephining which present an elevation are potentially leaking blebs. The chronic low grade inflammation observed in eyes with highly elevated blebs to me indicates a low grade iritis caused by a partial leak. That is, bacteria of low virulence enter blebs of this type but this condition does not occur in cases in which the blebs are flat.

Box 1711

AMEBIC DYSENTERY

ELMER B. CAMPBELL, M. D.
ST. PETERSBURG

Amebic dysentery is a specific protozoan infection which is caused by the microorganism Endamoeba histolytica. The cardinal manifestation of this dysentery is discharge of blood and mucus in the stool.

Attention was first directed to amebas as the possible cause of dysentery by Losch[1] in 1875. At that time the suggestion was not received seriously on account of the occurrence of acute cases of dysentery without amebic infection. It was not until 1891 that amebic dysentery was established as a definite entity by the studies of Councilman and Lafleur,[2] and it was not until 1900 that the theory was generally accepted by the profession. Even then there was much confusion because of the fact that amebas were frequently found in the stools of healthy persons.

Schaudinn,[3] in 1903, named the microorganism E. histolytica on account of its ability to dissolve tissue. The harmless form he called Endamoeba coli.

Amebic dysentery is usually regarded as an endemic disease of the tropical and subtropical climates, but it has also become established in the temperate zones. Explosive outbreaks have occurred, such as the one during the World's Fair in Chicago in 1933. Ordinarily the infection in a community is built up gradually. Many surveys have been made to determine the percentage of persons who are carriers. Thus it was discovered that out of a thousand healthy college students in the colder areas of the United States, E. histolytica is present in 4.1 per cent.

Read before the Pinellas County Medical Society, May 1, 1942.

The deduction, made from dependable records, indicates that in the general population of the United States amebas are present in from 5 to 10 per cent of those who dwell in centers where amebic dysentery is not endemic, and there is a still higher incidence among those in endemic centers.

E. histolytica is a tissue parasite, whose only portal of entry is through the intestinal tract. It exists in two forms, the motile trophozoite or active form, and the resting stage or cystic form. Transfer is by cyst only. Soiled fingers, unclean foods and impure drinking water are almost entirely responsible for infestation and reinfestation.

Ingested cysts pass through the stomach and excyst in the small intestines. The exact nature of the stimuli which incite encystation and excystation is not known. An amebula having four nuclei emerges from each cyst. Typical trophozoites develop from the amebula and are commonly arrested at points of stasis in the large bowel, such as the cecum, the ascending colon, the sigmoid flexure and the rectum. The period of incubation has been reported as varying from four to ninety-four days.

The underlying pathologic changes in amebiosis are always the same. The mucosa is penetrated where mechanical conditions are most favorable, as in the flexures, lower sigmoid and rectum. The appendix is frequently invaded and constitutes a focus of infection. The amebas are able to injure and penetrate the normal mucosa and then rapidly invade the submucosa. The underlying mucosa becomes necrotic, leaving an ulcer with undermined edges. The primary lesions are confined to the large bowel; ulcerated areas may be present throughout its entire extent.

The onset of the symptoms may be sudden or gradual. The bowel movements are accompanied by a moderate degree of tenesmus and abdominal discomfort. A history of intermittent attacks of diarrhea should direct suspicion toward amebic infection. There is usually no nausea or vomiting. In the more severe cases, however, nausea and vomiting may occur and be persistent. The appetite may remain good. The temperature and pulse may remain normal or be slightly elevated. Periods of mild leukocytosis occur from time to time. The patient becomes anemic and emaciated and slowly but steadily exhausted in the course of years.

The symptoms in the acute form of amebic dysentery may be comparatively easy to recognize. The subacute and chronic infestations are, however, too frequently overlooked. They may seldom present the clinical symptoms of amebic dysentery. Physical examination may reveal little except tenderness and abdominal spasms over the affected portions of the bowel.

In the differentiation of bacillary and amebic dysentery, the general character of the stools should be noted. In acute bacillary infection the stools are more fluid, containing but little fecal matter with less mucus and a considerable amount of blood, which may be laked. In amebic dysentery the stools usually contain considerable fecal matter mixed with blood and a noticeable amount of mucus.

Due to the rapid degeneration of the motile forms of Endamoeba in the stool specimen, fresh material for examination is essential. To insure this, the patient should be examined in the hospital or laboratory. If such examination is not practical, the specimen may be kept warm and at an even temperature by use of a large, water-filled container into which a smaller container, holding the specimen, is placed.

The distinction between the pathologic and nonpathologic species of Endamoeba concerns the field of protozoology.

Under early and adequate treatment, there is a chance for complete recovery. In neglected cases of many years' duration, accompanied by secondary bacterial infection, there may be little hope for restoration to full health. An acute attack affords no protection against subsequent infection. Intermittency and relapses are the rule, and every patient infested with amebas is a constant danger to himself and others. Clinically and experimentally, the course of an infection indicates that E. histolytica does not in itself induce toxicity; in large measure fatal results are attributed to bacterial invaders.

During the acute stage, the patient should be at rest in bed. The diet should be bland, but the amount may be liberal if the appetite demands.

Drugs are available in considerable variety for oral use and for intramuscular injection. Emetine bismuth iodide may be given in 3 grain doses, in capsule, by mouth at bedtime for twelve consecutive nights. Emetine hydrochloride may be given intramuscularly in 1½ grain doses for a period of twelve days. The margin between

the toxic and therapeutic dose of emetine is small. The early signs of toxic action consist of a fall in blood pressure and irregularity in cardiac action.

The arsenicals have been used with caution because of their toxicity. The compound most widely recommended is carbarsone, or *p*-carbamido-phenylarsonic acid. It is an excellent amebacide in early uncomplicated cases and is regarded as more satisfactory than other arsenical preparations because it is less likely to induce toxic reactions. Most authorities suggest the use of carbarsone in large doses, as much as 3 or more grains, three times a day for from fifteen to twenty days, rather than the original shorter period of ten days.

Next to emetine, the halogenated hydroxyquinoline compounds have become the most widely used agents because of the comparative safety to the patient, as well as their high potency as an amebacide. It is said that they may be administered continuously both orally and by rectum without untoward symptoms developing, except diarrhea, which is usually of short duration.

The amedacidal properties of these drugs is due to the iodine they contain. The first of these products was introduced as yatren in Germany in 1921. It was later introduced in this country as anayodin and contains about 28 per cent iodine. It is said to be identical with the product known as chiniofon. Another drug, known as vioform, contains about 41 per cent iodine.

Diodoquin, a newer protozoacide, consists of a double benzine radical, in which two of the hydrogen ions have been replaced by iodine, and it contains about 61 per cent iodine. Large doses of diodoquin have been administered over prolonged periods without producing toxic symptoms. It is recommended in acute, subacute and chronic cases in which the organisms are present in the intestinal lumen, the mucosal crypts and excavations. Diodoquin should be administered in doses of from 23 to 30 grains per day for twenty days, and after a rest period of from seven to ten days this treatment should be repeated. This drug may be given along with subcutaneous injections of emetine, or it may be alternated with a course of treatment with carbarsone.

Enemas of 100 to 200 cc. of a 1 per cent solution of diodoquin should be given in the evening, after a cleansing enema, and should be retained all night if possible. These should be continued until proctoscopic examinations show them to be no longer necessary.

Most of the therapeutic properties available are effective in producing a cure in cases of mild and early amebiasis, as well as in the symptomless carriers. Experimentation with volunteers, from a controlled group, who were fed the E. histolytica, resulted in the development of typical dysenteric symptoms in only 20 per cent; however, 80 per cent became carriers.

When the condition is not recognized, often it is because of oversight rather than lack of knowledge of the disease. It is said that too few clinicians yet realize the high incidence of this disease in all sections of the United States, but continue to think of it as confined to the tropics only. Amebic dysentery should be considered in the differential diagnosis of all cases in which diarrhea is present and obscure in origin. A negative test should not be accepted as proof of the absence of E. histolytica when the symptoms point to its presence. A number of examinations of the stool should be made by a competent technician on several successive days. Some authorities are of the opinion that in suspected cases the patient should receive treatment with protozoacides in order to avoid overlooking the proper diagnosis when it may be difficult or impossible to prove. Clinical improvement, when the patient is under treatment in these cases, becomes diagnostic.

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618 Fla. Natl. Bank Bldg.

DEXTROCARDIA

HENRY E. PALMER, M.D.
TALLAHASSEE

The term dextrocardia[1] signifies a transposition of the heart into the right side of the thorax. This condition may be congenital or acquired. Usually the cases of congenital displacement of the heart occasionally met with possess interest chiefly for the pathologist. The organ may be situated in the cervical region, within the abdominal cavity, or upon the exterior of the chest (ectopia cordis).

CONGENITAL DEXTROCARDIA

The most frequent form of displacement is congenital dextrocardia. It is of clinical as well as pathologic interest, inasmuch as the physician may be called upon to determine whether the displacement is pathologic or normal to the person concerned, and therefore devoid of danger. In most instances this abnormal situation of the heart is associated with transposition of the other viscera, a condition which has received the name situs inversus viscerum. That this association is not invariable has been noticed by Breschet.[1] The displaced heart occupies the same relative position on the right side that it does normally on the left, while the stomach and spleen are in the right and the liver in the left hypochondrium. The position of the intestines is also reversed, so that the rectum lies in the iliac fossa on the right instead of the left side.

Congenital dextrocardia occasions no symptoms unless it is associated with other cardiac anomalies, as sometimes is the case. It is stated, however, that in patients with this displacement of the heart pulmonary tuberculosis is apt to develop. Apropos of this possibility I recall the case of a Miss A., who applied to me for an examination because she had had her attention directed to the fact that her heart pulsated upon her right side, and she desired to learn if this phenomenon possessed any special importance. Examination showed the apex shock was in the fifth costal interspace on the right side about 1 inch inside the vertical nipple line. Cardiac dulness was of normal extent, reaching nearly to the right mammillary line. The cardiac sounds were of normal strength and clearness, and were located at the right of the sternum. Percussion of the abdomen showed gastric tympany beneath the right costal arch and hepatic dulness in the left hypochondrium. At that time the patient was in perfect health, and there was no history of tuberculosis in the family. Yet before two years had elapsed, pulmonary tuberculosis developed, to which she succumbed about a year later.

The detection of the dextrocardia depends upon the recognition of the cardiac impulse, dulness, and sounds to the right of the median line and their absence to the left. Its congenital nature is shown by the transposition of the abdominal viscera, which can scarcely be a matter of difficulty of determination.

ACQUIRED DEXTROCARDIA

The acquired form of dextrocardia may be complete, the heart lying entirely within the right half of the thorax, or it may be partial, in which case the organ is situated mainly but not wholly to the right of the median line. As this transposition of the heart is a pathologic condition, the other viscera remain in their customary position.

REPORT OF CASE

Nancy Nelson, a negro woman aged 55, is the mother of five children of whom only two are living, aged 33 and 25 respectively. Two children died when one month and a month and a half old. There is a history of an abortion at three months. Nancy has been unusually healthy although she had diphtheria at the age of 10 and pneumonia at the age of 25; she has had malarial fever off and on at various times.

Nancy came to me because of a pain in the region of the midsternal line caused by stepping on a stick that flew up, striking her at this point. Upon examining her chest I found that she had dextrocardia with transposition of the liver, stomach and spleen. Her weight was 126 pounds. The pulse rate was 84, slow, regular and full. The blood pressure was 130 systolic and 90 diastolic. Respirations were 16, and the temperature was 98 F. The specific gravity of the urine was 1.015, and urinalysis gave negative results as did examination of the blood for syphilis and malaria. The test for hookworm was positive.

This is the first case of congenital dextrocardia that I have met with in a practice of forty-nine years. I thought the physicians present would like to see Nancy; so I invited her to be present at this meeting. She was born on a farm and has lived and worked on one all of her life. You will observe that she is in pretty fair condition in spite of hard times and laborious work.

REFERENCES

1. Babcock, R. H.: Diseases of the Heart and Arterial System, New York, A. Appleton & Co., 1903, chap. 28, p. 861.

Read before the Fifth Annual Meeting of the Northwest Medical District, Tallahassee, Oct. 2, 1941.

Box 547.

WAR PROGRAM

SEVENTIETH ANNUAL MEETING
of the
FLORIDA MEDICAL ASSOCIATION

TO BE HELD AT JACKSONVILLE, FLORIDA
APRIL 15 and 16, 1943

NO ENTERTAINMENT

In consistency with the war effort, there will be no entertainment. The meeting will be limited to general sessions, meetings of the House of Delegates and the Association dinner.

REGISTRATION

All members and guests will be required to register and secure identification badges before attending any of the sessions.

HOTELS

Doctors planning to attend the meeting are urged to make hotel reservations several weeks in advance. The George Washington Hotel will be convention headquarters. Other hotels where reservations may be made are the Roosevelt, Seminole, Windsor, Mayflower and Floridan.

TECHNICAL EXHIBITS

Technical exhibits will be streamlined because of the war effort. Many firms will have equipment and products on display; others will be represented but have no display. The customary plush-draped booths will not be erected this year, as every possible effort is being made to limit the use of transportation facilities. It is important, however, for representatives of firms who have exhibited for many years to be present and to explain about new products, and how the old may be made to do. In a special section of the Journal and in the printed program many firms who exhibited in the past have used space for identification. The following firms have arranged to participate:

American Optical Company
Bard-Parker Company
The Borden Company
Camel Cigarettes
S. H. Camp and Company
Coca-Cola Company
Jones Metabolism Equipment Co.
Keleket X-Ray Company
Kellogg Company
Lederle Laboratories
J. B. Lippincott Company
Mead Johnson & Company
Wm. S. Merrell Company
C. V. Mosby Company
M & R Dietetic Laboratories
Petrogalar Laboratories
Philip Morris & Company
Sharp & Dohme
Southeastern Optical Company
Spencer, Inc.
E. R. Squibb & Sons
Surgical Supply Company
Tablerock Laboratories
Walker Vitamin Products, Inc.
John Wyeth & Brother

GENERAL SESSIONS

Three guest speakers have been invited to deliver addresses on war problems. The first guest speaker is scheduled for Thursday afternoon; the next, Thursday evening; and the third, Friday forenoon. These distinguished speakers were secured by President Gilbert S. Osincup and Dr. Herbert E. White, chairman of the Association's Committee on Scientific Work. The scientific sessions usually held at our annual conventions will be omitted this year.

FIRST GENERAL SESSION

Thursday — 1:30 p.m.
BALLROOM

Call to order, President Gilbert S. Osincup

Invocation, Captain R .W. Shrum (Ch C) U. S.N., Naval Air Station, Jacksonville

Gavel to First Vice President L. W. Blake

President's Address, Gilbert S. Osincup, Orlando

President resumes Chair

Report of Secretary-Treasurer-Editor, Shaler Richardson, and Managing Director, Stewart Thompson

Address (By invitation) "Medical Stewardship in War and Peace," Dr. Charles W. Roberts, member Board of Trustees, A.M.A., Atlanta, Ga.

Introduction, Delegates from other state societies:
E. F. Wahl, Thomasville, Ga.
W. F. Reavis, Waycross, Ga.
M. E. Winchester, Brunswick, Ga.

New Business

Announcements—
Dr. Luther W. Holloway

REFERENCE COMMITTEES

All reference committees will meet immediately after the Second General Session, Thursday evening, April 15. The names of delegates who have been appointed by President Gilbert S. Osincup to serve on reference committees are listed below:

1. HEALTH AND EDUCATION

BALLROOM

Herbert E. White, *Chairman*
T. Z. Cason
J. M. Hoffman
Frank D. Gray
Scheffel Wright

2. PUBLIC POLICY

SPANISH ROOM

Walter C. Jones, *Chairman*
Edward Jelks
Herman Watson
Horace A. Day
Lloyd J. Netto

3. FINANCE AND ADMINISTRATION

BLUE ROOM

Shaler Richardson, *Chairman*
H. Mason Smith
William M. Davis
Eugene G. Peek
Harrison A. Walker

FIRST MEETING, HOUSE OF DELEGATES

Thursday — 3:30 p.m.
BALLROOM

(*Front seats reserved for delegates — other Association members please occupy seats in rear*).

President Osincup in the Chair
Roll Call and seating of delegates
Application for charter, Nassau County Medical Society
Seating of delegate, Nassau County Medical Society
Adoption of minutes as published in May, 1942 Journal
Recognition of delegates to A.M.A.: Meredith Mallory and Edward Jelks (*Official report read at meeting of Board of Governors and published in September, 1942 Journal*)
Election of one delegate and one alternate to A.M.A. meeting for two-year terms. (*A.M.A. By-Laws, Chapter I, Sec. 1: "A member of the House of Delegates must have been a member of the American Medical Association and a Fellow of the Scientific Assembly for at least two years next preceding the session of the House of Delegates at which he is to serve."*)
President—Announce reference committee personnel
Reading of resolutions
Meeting place, 1944
Reports of Committees: (*Two copies of each report is to be laid on speaker's table immediately after reading*)
Board of Governors, Louie Limbaugh
Scientific Work, Herbert E. White
Legislation and Public Policy, H. D. Van Schaick
Medical Education and Hospitals, Walter A. Weed
Public Relations, Leigh F. Robinson
Necrology, Gerry R. Holden
Medical Postgraduate Course, T. Z. Cason
Cancer Control, Hewitt Johnston
Medical Economics, Harrison A. Walker
Venereal Disease Control, E. T. Sellers
Interrelationship, Daniel A. McKinnon
Tuberculosis and Public Health, W. C. Blake
State Controlled Med. Institutions, H. Mason Smith
Maternal Welfare, Samuel R. Norris
Child Health, George L. Cook
Conservation of Vision, Shaler Richardson
Advisory to Woman's Auxiliary, George C. Tillman
Representatives to Industrial Council, R. H. Walker
Council, Lloyd J. Netto
War Participation, Edward Jelks
Board of Past Presidents, H. Mason Smith
Publication, Herman Watson
New Business
Announcements—
Reference Committees will meet immediately after second general session.
Adjournment

ASSOCIATION DINNER

Thursday — 7:30 p.m.
CONVENTION HALL

Members and their ladies, Association guests, Exhibitors. Informal. Dinner tickets, $2.50.

SECOND GENERAL SESSION

Thursday — 8:30 p.m.
BALLROOM

Call to order, President Gilbert S. Osincup
Address (By invitation), "British and American Experiences in Civil Defense," Dr. George Baehr, Chief Medical Officer, Office of Civilian Defense, Washington, D. C.

SECOND MEETING, HOUSE OF DELEGATES

Friday — 9:30 a.m.
BALLROOM

Roll Call (*No alternates are to be seated for delegates attending yesterday's meeting*)
Recommendations of Reference Committees:
No. 1, Health and Education
No. 2, Public Policy
No. 3, Finance and Administration
Other unfinished business
New Business
Announcements
Adjournment

THIRD GENERAL SESSION

Friday — 10:30 a.m.
BALLROOM

Call to order, President Gilbert S. Osincup
Address (By invitation), "The Doctor in the War Effort," Col. Sanford W. French, Chief of Medical Service, Fourth Corps Command, U. S. Army, Atlanta, Ga.
Recess

Friday — 12:00 noon

President Osincup in the Chair
Unfinished business
New business
Election of President-Elect
Election of First Vice President
Election of Second Vice President
Election of Third Vice President
Election of Secretary-Treasurer and Editor of the Journal
Dr. Eugene G. Peek escorted to the Chair as new president
Presentation of Past President's Button to Dr. Gilbert S. Osincup by Dr. H. Mason Smith
Adjournment

BOARD OF GOVERNORS will meet in Blue Room at 12:30 p. m., Friday.

TECHNICAL EXHIBITS

This year, probably more than at any time in the past, the technical exhibits will fill a vital need both for our members and for exhibiting firms. Many doctors from Florida annually visit large medical centers to keep in close touch with the latest in technics and equipment. This year most of them will be unable to leave their practices. They can, however, secure a great deal of important information from the representatives of exhibiting firms.

Likewise, exhibitors appreciate this opportunity of meeting our members. Many have lost valuable representatives and for other reasons have had to curtail their activities in the field. Much of the heavy equipment which they usually display at our conventions will be missing this year. Some firms will ship no equipment, but their representatives will be present to give information and literature on what is new and how the old can be made to do. The value of our convention will be increased by the splendid cooperation of firms participating.

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SEVENTIETH ANNUAL CONVENTION WAR PROGRAM

The complete program for the annual meeting this year appears on pages 426 and 427 in this Journal. This meeting will be held on April 15 and 16 at Jacksonville, with headquarters at the George Washington Hotel. You are urged to make your hotel reservations as far in advance as possible. Refer to page 426 for a list of available hotels.

There will be two meetings of the House of Delegates, the first at 3:30 p.m., Thursday, and the second at 9:30 a.m., Friday.

Three addresses will be delivered by distinguished physicians who have been invited by the Association's officers. The first address, on "Medical Stewardship in War and Peace," will be delivered by Dr. Charles W. Roberts of Atlanta, a member of the Board of Trustees of the Americal Medical Association.

"British and American Experiences in Civil Defense" will be discussed by Dr. George Baehr, Chief Medical Officer, Office of Civilian Defense, Washington, D. C., and Clinical Professor of Medicine, Columbia University.

An address on "The Doctor in the War Effort" will be delivered by Col. Sanford W. French, Chief of Medical Service, Fourth Corps Command, U. S. Army, Atlanta.

The guest speakers will bring instructive and interesting messages which should be an inspiration to every physician who is able to attend.

Members are urged to extend personal invitations to doctors who are in the armed services, stationed in Florida.

ALLOCATION OF PHYSICIANS FOR MEDICAL CARE SATISFACTORY IN FLORIDA

The problem of medical care in Florida has so far been solved satisfactorily. The percentage of doctors joining the armed services is considerably over the quota designated for 1942. Notwithstanding the large proportion of doctors taken out of private practice, the problem of medical care for the citizens of our state has been adequately managed.

In some states there has been considerable agitation concerning legislation to authorize temporary licenses for physicians who are moving from one state to another. This, however, we do not believe is true in so far as Florida is concerned. It would certainly be detrimental to the cause of the health of the public in our state to take a problem to the Legislature, which has already been solved to the satisfaction of all concerned. There is plenty of time for the Legislature to intervene when those who are closest to the problem of medical care and public health feel that health protection is inadequate.

The state has been carefully surveyed as to medical care and a doctor is being placed in every community where the need is evident. The decision as to when a doctor is needed for any community is left entirely to the local county medical society. Doctors themselves are naturally the first to realize that a shortage exists.

The plan now in effect was carefully worked out through the splendid cooperation of the Board of Governors of the State Medical Association, the State Board of Medical Examiners, the Procurement and Assignment Service, the State Board of Health, the Chief of Medical Service of Civilian Defense and the Governor of our State.

GRADUATE DEPARTMENT OF MEDICINE ORGANIZED

The University of Florida, through Dr. John J. Tigert, president, has announced the organization of a Department of Medicine in its Graduate School to be located in Jacksonville. The work of the Department will be carried on with the cooperation of the Florida Medical Association and the Florida State Board of Health. Dr. T. Z. Cason will be in general charge as Director. The faculty will be diplomates of their specialty boards.

The purpose of the Department will be to conduct graduate courses and to promote research work in medicine and surgery. For the past ten years a graduate short course for doctors of medicine has been annually conducted in Jacksonville. The registration in the June 1942 course reached a total of 200. The newly organized department is an outgrowth of this work. Continuation courses for practicing physicians with ample facilities for clinical instruction will be given from time to time as the demand arises. In the present emergency it is more than ever imperative that refresher courses for physicians be provided and that instruction on the graduate level in medicine and surgery be made available in the State.

MARCH JOURNAL DATED APRIL

This year there will be no Journal dated March; the March Journal has been dated April. This has been done to advance the date of the Journal one month. The reason is obvious. The Journal is mailed about the 25th of the month and often does not reach its readers until the end of the month. Therefore, according to the date on the cover, it is practically a month late when received. Under the new arrangement, the April issue will be mailed the latter part of March, and will be available for reading during the month of April.

All schedules for the submittal of articles, copy and advertising for the Journal will continue without interruption; the only change is that copy received by February 25 appears in the April instead of in the March Journal. This makes it possible to have the April Journal in the mails before the first of that month.

The third assistant postmaster general, Division of Classification, Washington, D. C., under date of February 2, 1943, advised that it would be permissible to advance the date of publication as contemplated. He specified, however, that copies of the first issue published in advance of the month shown as the date of issue should not be given a double serial number or double date of issue.

Mr. H. L. Sandberg, Director of the Cooperative Medical Advertising Bureau of the A.M.A., wrote under date of February 12 that he knew of no reason why we should not date our Journal one month ahead. He also stated that he thought it might be well for other monthly medical journals to follow Florida's procedure.

NOTICE TO DELEGATES AND COMMITTEE CHAIRMEN

The first meeting of the House of Delegates will be held on Thursday, April 15, at 3:30 p.m. in the hallroom of the George Washington Hotel, Jacksonville. Delegates are required to register as soon after arrival as possible. The registration desk will be located in the banquet room.

Special badges have been prepared for members who are to be seated in the House of Delegates. To secure a delegate's badge, official credentials, signed by the secretary of his county medical society, must be presented by the delegate at the registration desk. Visitors to the House of Delegates are requested to occupy the seats in the rear of the room, in order that the official delegates may sit together at the front of the assembly hall.

Chairmen of standing committees are urged to be present on time so their reports may be read as scheduled in the official program. All committee reports and resolutions are to be prepared in duplicate and both copies laid on the speaker's table immediately after being read.

Delegates and committee chairmen, please note the time and date of the first meeting of the House of Delegates—3:30 p.m., Thursday, April 15, George Washington Hotel.

WITH CLUBS IT'S LEGAL

A farmer or other producer hauling his produce into New York City must stop at the city line to take on and pay a member of the local teamsters' union. Truck owners who have resisted paying this tribute have suffered damage to their vehicles and the destruction of their cargoes. The Supreme Court of the United States recently ruled that so far as federal statutes went, these union activities were perfectly legal and the federal Government could not interfere with them. The consumers of New York pay this union tribute in higher prices.

Organized physicians in the city of Washington, D. C., conspired to interfere with the operations of a cooperative organization to give cheap medical attention and hospitalization to its members who were Government employes. The physicians were charged with attempting to prevent the members of their association from accepting employment under the group health plan and to restrain hospitals from affording facilities to patients of physicians employed under the group plan. The Supreme Court ruled that the organized physicians violated the Sherman anti-trust act.

We do not raise the question as to whether the court correctly interpreted the law in each case.

Apparently the Washington physicians went about this thing in the wrong way. They should have organized a union. The union officials would then hire a group of plug-uglies. These goons could then have beaten up the physicians who did not conform to union rules. They could have picketed the hospitals and refused to let supplies be taken to them.

In all of these activities they would have been immune from federal prosecution. Of course, the local police might have become inquisitive but who in recent years has heard of local police daring to interfere with the activities of union picket lines? What reason is there to believe that Washington, where unions have such powerful friends, would be an exception?

Well, at any rate the good doctors of Washington now know who constitute the "underprivileged."—*Wall Street Journal.*

MEMBERS IN ARMED SERVICES

Names and home addresses of members in the armed services, by county societies.
Please report omissions or corrections to Box 1018, Jacksonville.

ALACHUA

Andrews, Edwin H. Gainesville
Cobb, Alva T. "
Collins, Grover C. "
Dell, J. Maxey, Jr. "
Jennings, Lloyd H. Starke

BAY

Adams, Daniel M. Panama City
Parker, Martle F. "
Roberts, William C. "

BREVARD

Cooke, Frank N. Cocoa
Hay, I. M. Melbourne

BROWARD

Blount, Robert E. Ft. Lauderdale
Camp, Milton N. "
Carson, Russell B. "
Cohn, Jess V. Hollywood
Farringer, Robert H. "
Lovejoy, M. Austin Ft. Lauderdale
Lumpkin, Lloyd U. "
Peavy, Henry J. "
Pierce, Francis D. "
Shell, Paul G. "
Snyder, F. Leslie Hollywood
Sory, Curtis H. Ft. Lauderdale

COLUMBIA

Busey, John F., Jr. Lake City

DADE

Adler, Lawrence Miami
Agos, I. H. Miami Beach
Alexander, Julius Miami
Alexander, Lassar "
Allen, Ralph F. "
Arango, Roger J. "
Auslander, Harold P. Miami Beach
Baker, Juel M. Miami
Barge, William J. "
Bernstein, William H. Miami Beach
Bertram, Albert J. Miami
Boughton, Herman Miami Beach
Burbacher, Charles R. Coral Gables
Burch, John E. Miami
Capland, Lewis Miami Beach
Carroll, Bruce D. Miami
Christian, William A. Miami Beach
Clark, Irving T. Miami
Cleveland, Jack Q. Coral Gables
Cogan, James R. Miami Beach
Coleman, Benjamin "
Coplan, Milton M. Miami
Cullipher, Edward W. "
Dees, John "
DeVore, Louise "
Dieterich, Frederick H. "
Dix, John W. Coral Gables
Dowlen, L. Washington Miami
Dowlen, Otto S. Miami Beach
Eichert, Herbert Miami
Elam, James O. "
Exley, David W. Miami Beach
Falk, Jack J. "
Fishbein, I. Leo "
Fitzpatrick, Emmett T. "
Forastiere, Roger J. Miami
Fox, Edward F. "
Frehling, Stanley Miami
Frobisher, H. B. Coral Gables
Garrard, Hollis F. Miami Beach
Goodman, Bernard "
Gross, Alfred "
Hanna, Fuad Miami
Hardie, Dan, Jr. "
Harris, Robert M. "
Hewlett, Frank W. Coral Gables
Hinton, Andrew H. Miami
Howell, R. Spencer "
Hutson, Thomas W. "
Jack, Ralph W. "
Jenkins, Leslie M. "
Kauders, Ferdinand H. "
Kells, Paul "
Kline, Bernard Miami Beach
Kuckku, Morris E. Miami
Kupper, William H. "
Lamar, Carlos P. "
Lawther, Harry C. "
LeDrew, Frederick "
Leonard, George N. Miami Beach
Levin, Alfred G. Miami
Litterer, A. Buist "
McClamroch, James M. "
McElheny, Franklin "
McKenzie, E. Norton "
McKenzie, Jack A. "
McLemore, Carl S. Miami Beach
McLeod, Norman W., Jr. Miami
Marion, Dominic A. "
Martin, Marion C. "
Maxwell, Eugene B. Miami Beach
Messner, Paul O. Miami Springs
Milton, John D. Miami
Mitchell, George A. "
Mosley, R. Sam "
Mouradian, Albert H. "
Nathan, David A. Miami Beach
Nuzum, Russell K. Miami
O'Donnell, William G. "
Oliver, Robert M. "
Otto, Thomas O. Miami Beach
Owens, W. Duncan "
Payton, Frazier J. "
Pearson, Julius R. "
Pearson, R. Judson, Jr. "
Pepper, Max Miami
Phillips, Kenneth "
Pollock, Benjamin G. Miami Beach
Preston, Edwin P. "
Putman, James H. Miami
Quillian, Warren W. Coral Gables
Rand, Harold Miami
Rash, Jack O. W. "
Reckson, Murray M. Miami Beach
Reese, Homer A. Miami
Richardson, John R. Miami Beach
Robbins, Alexander "
Robbins, Bernard "
Roberts, Thomas L. Coral Gables
Rogers, Hunter B. Miami
Salley, S. Marion "
Sandberg, T. D. Coral Gables
Sappenfield, Ralph S. Miami
Saslaw, Milton S. "
Scarborough, C. A. "
Schwarz, M. Jandon Miami Beach
Selevan, Sol. "
Silverman, Harry Z. "
Sisler, Bruce H. Miami
Skilling, Francis C. "
Spicer, Robert T. "
Stannus, Donald G. Miami Beach
Sternberg, J. Charles Miami
Stewart, Franz H. "
Stewart, Joseph S. "
Thomas, Efton J. Miami Beach
Torrado, Rene A. "
Travers, M. Paul "
Turk, John P. Miami
Vinson, Willie J. "
Voris, Frank B. Miami Beach
Wallace, Albert W. "
Walsh, Gerald J. Miami
Walterman, David Miami Beach
Weiland, Arthur H. Coral Gables
Werblow, S. Charles Miami
Whelchel, Lynn W. "
Whitmer, Kenneth S. "
Wigdor, Meyer Miami Beach
Woods, Frank M. Miami
Youmans, Corren P. "
Zimmerman, Paul A. Coral Gables
Zivitz, Nelson Miami Beach

DE SOTO-HARDEE-HIGHLANDS-CHARLOTTE-GLADES

McSwain, Gordon H. Arcadia
Martin, Leldon W. Sebring
Simmons, S. J. Belle Glade

DUVAL

Adams, Thomas S. Jacksonville
Baker, Archie J. "
Baldwin, Donald M. "
Ball, William H. "
Bedell, Sullivan G. "
Borland, James L. "
Bowen, Frederick H. "
Boyd, Charles W. "
Canipelli, Edward "
Carithers, Hugh A. "
Croft, George W. "
Ferrara, John D. "
Funkenstein, Dan H. "
Galin, Jack "
Gorman, John M. "
Graves, A. Judson "
Hanson, Karl "
Haverfield, W. Tracy "
Hurt, Floyd K. "
Kemp, Simon I. "
Kendrick, M. Hayne "
King, F. Gordon "
King, Raymond H. "
Kirk, William W. "
Leitner, Elmer E. "
Lipscomb, T. H. "
Lombardo, Samuel S. "
Lovejoy, John F. "
McCall, E. Frank "
McCullagh, William H. "
Malone, Bert H. "
Mangels, Martin, Jr. "
Manning, William S. "
Manson, A. Mackenzie "
Mathers, Daniel H. "
Mendoza, Carl C. "
Milam, Ernest B. "

MEMBERS IN ARMED SERVICES—*Continued*

Nelson, Thomas F. Tampa
Oberdorfer, Aaron Z. Jacksonville
O'Dell, John C. "
Oetjen, G. F. "
Parks, Lorenzo L. "
Patterson, James N. "
Porter, Harry W. "
Richards, Ferdinand "
Rose, Joseph "
Safer, Jacob V. "
Simmons, Eugene D. "
Slaughter, Frank G. "
Sompayrac, Lauren M. "
Stamps, Walker "
Strumpf, Irving J. "
Swift, Edwin C. "
Watt, E. Clements "
Wattles, F. Merrill "
Weil, Nathan, Jr. "
Weinreb, Joseph "

ESCAMBIA

Bell, John D. Pensacola
Click, Gustav N. "
Essrig, Irving M. Tampa
Hixon, William P. Pensacola
Kennedy, S. G. "
McSween, John C. "
Mellen, Noel C. "
Morse, George W. "
Randall, William S. "
Rubin, Nathan S. "
Stebbins, Alvin L. "
Tugwell, Wilton E. "
Turberville, Joe I. Century
Williams, William L. Pensacola

HILLSBOROUGH

Adamo, Frank S. Tampa
Annis, Leonard S. "
Blackmon, Heyward J. "
Brown, Harold O. "
Chunn, C. Frank "
Cole, Herschel G. "
Costantino, Eugene F. "
Cowart, James T. "
Heath, Ralph T. "
Helms, John S. "
Hewit, Linus W. "
Knowlton, Horace A. "
Linz, Frank T. "
Martin, Douglas D. "
Mertz, R. Bradner "
Murphey, David R. "
Nix, Harold G. "
Parsons, Hugh E. "
Rudisill, C. A. "
Torretta, Joseph N. "
Trice, William W. "

LAKE

Ashton, W. Lee Umatilla
Bowen, Louis R. Eustis
Bowie, Clyde F. Leesburg
Gleason, Albert H. Umatilla
McGuire, John F. Clermont
Oetjen, Leroy H. Leesburg
Wood, Will L. Eustis

LEE

Allan, Harry L. Ft. Myers
Clement, W. B. Punta Gorda
Girardin, A. L., Jr. Ft. Myers
Jennings, John L. Boca Grande
Stead, Vergil G Naples
Stipe, Harvie J. Ft. Myers

LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON

Andrews, Edson J. Tallahassee
Clements, Merritt R. "
Ekermeyer, Ernest W. "
Holland, Francis T. "
Johnson, A. B. Jamestown, N.Y.
Miles, W. G. Chattahoochee
O'Connor, James B. "

MADISON-SUWANNEE

Black, Irby H. Live Oak
Chappell, Frank V. Madison

MANATEE

Floyd, Alva J. Palmetto
Wentzel, W. E. Bradenton

MARION

Cumming, Richard C. Ocala
Harrell, Henry L. "
Lytle, Carl S. "
Moore, John P. "
Russell, Ralph E. "

ORANGE

Anderson, Claude Orlando
Bichard, Phillip M. "
Butt, Thomas C. "
Chappell, J. Rocher "
Christensen, Louis N. "
Crisler, George R. Winter Park
Economou, James G. Orlando
Gwathmey, G. Tayloe "
†Hatfield, John R. "
Henderson, Robert P. "
Hitchcock, Edgar E. "
Hoffmann, Carl D. "
Ingram, Hollis C. "
Irwin, Thomas M. "
Jewett, Eugene L. "
Kingsbury, Lawrence H. "
Kundert, Palmer R. "
Mathers, Fred "
Mitchell, William S. "
Orr, Louis M. "
Ramsey, Russell W. Winter Park
Robertson, Don C. Orlando
Scanlon, John J. Winter Garden
Sears, Warren H. Winter Park
Sessions, Raymond R. Kissimmee
Stecher, Joseph L. Orlando
Sutter, Leroy M. "
Taylor, Byrne E. "
Zieve, Sanford L. "

PALM BEACH

Bippus, W. E. West Palm Beach
Daly, Thomas E. " "
Dawson, G. M. " "
Derrick, C. J. " "
Gill, Richard S. " "
Herpel, F. K. " "
James, Lorenzo, Jr. Camp Blanding
Kelley, Oscar L. West Palm Beach
Nieder, James R. Delray Beach
Ombres, S. Richard Palm Beach
Rotter, Saul D. Lake Worth
Smith, Michael West Palm Beach
Sory, Bailey B. Palm Beach
Sory, James R. West Palm Beach
Stanley, Thomas Z. " "
Weems, William H. " "
Wilkins, William B. Palm Beach

†Deceased

PASCO-HERNANDO-CITRUS

Manley, David B. Zephyrhills

PINELLAS

Anderson, C. O. St. Petersburg
Farber, William P. "
Farrington, C. L. "
Feaster, Orion O. "
Frederick, A. R. "
Funk, Neil E. "
Gable, Linwood M. "
Gable, N. W., Jr. "
Grace, Angus D. "
Groves, W. H. Clearwater
Hagan, V. LeRoy "
Hagood, John D. "
Harden, W. W. St. Petersburg
Harrison, Everett M. Dunedin
Hebard, Charles E. St. Petersburg
Langley, Francis H. "
McConnell, W. H. "
Marr, Norval M. "
Meyer, Francis P. "
Morin, H. Gerald "
Murphey, Dan'l F. H. "
Needles, Robert J. "
Owen, R. Wynn S. "
Purcell, Thomas R. Tarpon Springs
Rogers, H. Milton St. Petersburg
Rowell, John P. "
Rudolph, Councill C. "
Ulm, A. Hardy Dunedin
Whaley, F. Eugene St. Petersburg
Wood, Rowland E. "
Woodville, John B. "
Wright, Claude B. "
Wylie, LeRoy A. "

POLK

Annis, Jere W. Lakeland
Barranco, Anthony J. Lake Wales
Bond, Benjamin J. Winter Haven
Bosworth, Joe M. Lakeland
Clark, Samuel J. "
Dykes, Chapman Haines City
Gachet, Fred S. Lakeland
Hargrove, Julian L. Bartow
Keramidas, T. C. Winter Haven
Kibler, John M. Lakeland
Lancaster, L. L. Bartow
Martin, Emmett E. Haines City
Ralston, Raymond H. Lakeland
Tomlinson, J. Pitt, Jr., Lake Wales

PUTNAM

Bell, F. Emory Palatka
Gurganious, Allen P. "

ST. JOHNS

Britt, Reddin St. Augustine
Norris, Hardgrove S. "
Spencer, John "
Webb, Walter D. "

ST. LUCIE-OKEECHOBEE-INDIAN RIVER-MARTIN

Davey, Walter F. Stuart
Goodwin, Hugh B., Jr. Ft. Pierce
Hardee, E. B. Vero Beach
Martin, Leon H. Ft. Pierce
Robertson, James C. Vero Beach
Stoner, Cyrus H. Ft. Pierce

MEMBERS IN ARMED SERVICES—*Continued*

SARASOTA

Butcher, John M. Sarasota
Hoskins, W. H. Venice
Martin, Stanley T. Sarasota
Matthews, A. Lamar "
Miller, Cecil E. "
Patton, Sherrel D. "
Powers, Earl J. Blanchester, O.
White, Millard B. Sarasota

SEMINOLE

Barks, Orville L. Sanford
McDaniel, Thomas F. "
Park, Charles L. "

VOLUSIA

Drohomer, P. A. Daytona Beach
Jennings, William L. " "
Jones, C. B. New Smyrna Beach
Lenholt, Eric H. Daytona Beach
Myres, M. J. " "
Reeser, Richard, Jr. Daytona Beach
Rutter, Joseph H. " "
Seltzer, Morris B. " "
Silsby, Harry Z. New Smyrna Beach
Tribble, Charles E. DeLand
Vallotton, J. Ralph Daytona Beach
Wells, J. Ralston " "
West, J. Richard " "
Whitney, Karl R. " "

WASHINGTON-HOLMES

Watson, Francis M. Chipley

DONATIONS FOR PURCHASE OF WAR BONDS

Under the plan sponsored by the Board of Past Presidents and approved by the Board of Governors, the following donations, totaling $3,445.38, have been received for the purchase of War Bonds to offset dues of members in the Armed Services:

ALACHUA COUNTY $ 25.00
Thomas, W. C., Gainesville

BAY COUNTY 5.00
Adams, Powell, Panama City

BREVARD COUNTY 5.00
Kenaston, T. C., Cocoa

BROWARD COUNTY 360.00
Blessing, Robert, Ft. Lauderdale
Robinson, Leigh F., Ft. Lauderdale
(From Society Treasurer $250.00)

COLUMBIA COUNTY 37.25
Bates, Thomas H., Lake City
Harkness, R. B., Lake City

DADE COUNTY 144.38
Jones, Walter C., Miami
Norman, Estella G., Battle Creek, Mich.
Pearson, Homer L., Miami
Stoddard, Guy R., Miami Beach
Walker, Harrison A., Miami Beach
Welch, P. B., Miami

DESOTO-HARDEE-HIGHLANDS-CHARLOTTE-GLADES COUNTY 18.75
Simmons, J. A., Arcadia

DUVAL COUNTY 1,387.50
Adams, Mark E., Jacksonville
Baker, Lynne E., Jacksonville
Beals, John A., Jacksonville
Broadbent, Oliver P., Jacksonville
Brown, Alan, Jacksonville
Caraway, Archibald F., Jr., Jacksonville
Carefoot, E. I., Jacksonville
Cason, Turner Z., Jacksonville
Chapman, Benjamin A., Jacksonville
Chilli, Joseph L., Jacksonville
Cleveland, Robert H., Jacksonville
Cone, Adolph, Jacksonville Beach
Copeland, S. M., Jacksonville
Copp, Francis A., Jacksonville
Croft, Theo. G., Jacksonville
Dyrenforth, Lucien Y., Jacksonville
Erwin, Stanley, Jacksonville
Field, Thomas S., Jacksonville
Fort, Frank L., Jacksonville
Harrell, O. E., Jacksonville
Henley, Charles F., Jacksonville
Holden, Gerry R., Jacksonville
Jelks, Edward, Jacksonville
Johnston, Crowell W., Jacksonville
Keisling, Frederick C., Jacksonville
Knauer, W. Jerome, Jacksonville
Limbaugh, Louie, Jacksonville
Lyerly, J. G., Jacksonville
McGinnis, Robert H., Jacksonville
McIver, Robert B., Jacksonville
Manhoff, Ben, Jacksonville
Morris, Kenneth A., Jacksonville
Norris, Samuel R., Jacksonville
Pasco, J. D., Jacksonville
Peyton, Harry A., Jacksonville
Provinsky, Leo B., Jacksonville
Richardson, George W., Jacksonville
Richardson, Shaler, Jacksonville
Ross, William E., Jacksonville
Royce, Clayton E., Jacksonville
Schnauss, F. H., Jacksonville
Schnauss, William R., Jacksonville
Shaw, W. McL., Jacksonville
Taylor, H. Marshall, Jacksonville
Van Schaick, Harold D., Jacksonville
Veal, Ernest W., Jacksonville
Waas, Frederick J., Jacksonville
Wachtel, Leo M., Jr., Jacksonville
Wilson, J. Frank, Jacksonville
Woolsey, Bertram F., Jacksonville

ESCAMBIA COUNTY 36.50
Pierpont, J. H., Pensacola

HILLSBOROUGH COUNTY 662.25
Adamson, W. P., Tampa
Boling, John R., Tampa
Cook, George L., Tampa
Dickinson, J. C., Tampa
Duke, R. R., Tampa
Duncan, W. P., Tampa
Gilbert, Elsie, Tampa
Gilmer, E. S., Tampa
Griffin, J. C., Tampa
Jensen, H. J., Tampa
Lott, H. B., Tampa
Lowry, B. W., Tampa
Maguire, T. C., Plant City
Maner, George R., Tampa
Moore, J. T., Tampa
Rowlett, W. M., Tampa
Smith, H. Mason, Tampa
Woodburne, A. W., Tampa

LEE COUNTY 37.50
Bartleson, Fred D., Ft. Myers
Bostelman, Ernest, Ft. Myers

LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON COUNTY 181.50
Brinson, J. B., Monticello
Davis, Julius C., Quincy
Garmany, George H., Tallahassee
Palmer, Henry E., Tallahassee
Pound, J. H., Tallahassee
Rhodes, B. M., Tallahassee
Ruediger, E. Henry, Chattahoochee
White, Sarah Parker, Tallahassee

ORANGE COUNTY 169.75
Collins, Charles J., Orlando
Gray, Frank D., Orlando
Kirk, Albert C., Orlando
McEwan, Duncan T., Orlando
McEwan, John S., Orlando
Mallory, Meredith, Orlando
Pines, John A., Orlando
Seltzer, Joseph G., Orlando
Weed, Walter A., Orlando
White, Roland T., Orlando

PALM BEACH COUNTY 58.75
Ditman, Norman E., Palm Beach
George, W. W., West Palm Beach
Johnson, V. M., West Palm Beach
Stephens, Edgar W., West Palm Beach

PASCO-HERNANDO-CITRUS COUNTY 18.75
Jones, W. Wardlaw, Dade City

PINELLAS COUNTY 57.50
LeBreton, Prescott, St. Petersburg
Palmer, Harrison G., St. Petersburg
White, Paul L., St. Petersburg
Wood, Alvin J., St. Petersburg

POLK COUNTY 187.50
Boulware, J. R., Lakeland
Dunham, Kenneth, Frostproof
Gilchrist, J. G., Bartow
Griffin, J. D., Lakeland
Horton, Waldo, Winter Haven
Meriwether, W. G., Mulberry
Pearce, C. C., Mulberry
Tillis, W. L., Lakeland
Watson, Edgar, Lakeland
Watson, Herman, Lakeland

ST. JOHNS COUNTY 47.50
Lockwood, Vernon A., St. Augustine
White, Herbert E., St. Augustine

VOLUSIA COUNTY 5.00
Howe, Raymond, Daytona Beach

COUNCILORS' REPORTS

THIRD DISTRICT—

LUCIEN Y. DYRENFORTH, M.D. ..... *Jacksonville*
Alachua, Bradford, Clay, Duval, Flagler, Gilchrist, Levy, Marion, Nassau, Putnam, St. Johns, Union.

My report as councilor for District Three covers the time lapsing since the annual meeting in Hollywood last April. The fact that the district medical meetings were postponed this year relieved the councilors of the usual details and activities in connection with holding the usual fall meetings.

There has been an outstanding event somewhat unusual in the experience of a councilor, to wit: the organizing of a new county medical society in Nassau County. Dr. Stewart Thompson, managing director, and your councilor were invited by the charter members of the newly formed society to meet with them at dinner on September 11, 1942. The meeting was attended by an enthusiastic membership of seven. At this meeting the members elected the following officers, subscribed their dues, and were informed that their application for charter would go through the regular channels: President, Dr. George A. Dame; Vice President, Dr. David G. Humphreys; Secretary-Treasurer, Dr. Ellsworth F. Waite.

This newest addition to the list of county societies is to be congratulated upon a forward step of much importance to its members. The advent of the new county hospital at Fernandina has been a source which made the forming of the society a definite advantage.

The gasoline restrictions which were imposed about this time forbade the attendance at the first called meeting of the Nassau County Medical Society, much to the disappointment of your councilor, Dr. Thompson and invited guest speakers from the neighboring Duval County Society.

Aside from assisting this new society in its organization, there has been nothing of importance referred to your councilor from this district.

SIXTH DISTRICT—

EDGAR WATSON, M.D. ..... *Lakeland*
Charlotte, Collier, DeSoto, Glades, Hardee, Hendry, Highlands, Lee, Polk.

DeSoto, Hardee, Highlands, Charlotte and Glades counties have three members in military service. The society has voted to hold its meetings quarterly for the duration.

Lee, Collier and Hendry counties have six members in the service and eleven at home. The society has postponed regular meetings due to decreased attendance.

The Polk County Society in the past year held its regular meetings and had a number of outstanding speakers, among whom were Dr. Paul D. White and Dr. Walter Bauer of Boston. Dr. White is physician in charge of cardiac clinics and laboratory, Massachusetts General Hospital, Boston, and lecturer in medicine, Harvard University. Dr. Bauer is associate professor of medicine, Harvard University; director of the Robert W. Lovett Memorial Foundation for the study of crippling diseases, and staff physician in Massachusetts General Hospital at Boston. Dr. Bauer gave a most interesting talk on "Joints and Diseases of Joints."

There are two new members, Dr. W. W. Hardman and Dr. Lee E. Parmley, both of Winter Haven. The Polk County Society has fourteen in military service.

BIRTHS AND DEATHS

BIRTHS

Dr. and Mrs. J. Sudler Hood of Clearwater announce the birth of a son, John Sudler, on February 9, 1943.

DEATHS

Dr. Emil Lustig of St. Petersburg died on February 23.

Dr. James M. Anderson of St. Petersburg died on February 7.

STATE NEWS ITEMS

The eleventh annual Graduate Short Course will be held this year at the George Washington Hotel, Jacksonville, June 21 to 26, inclusive. The Short Course will be given by the Department of Medicine of the Graduate School of the University of Florida and the Florida Agricultural and Mechanical College in cooperation with the Florida Medical Association and the State Board of Health. Some members of last year's faculty will be back again this year, but there will be new faces in Obstetrics and Pediatrics.

At the call of the chairman, a meeting of the Association's Committee on War Participation—Procurement and Assignment was held in Jacksonville at the George Washington Hotel, Sunday, February 28. The session opened at 9:30 a.m. and adjourned at 6:15 p.m. Members pres-

ent were Drs. Edward Jelks, chairman, Gilbert S. Osincup, Shaler Richardson, Walter C. Jones and J. C. Dickinson. Dr. W. C. Payne represented Dr. C. C. Webb who was absent. Those attending in an advisory capacity were Dr. Eugene G. Peek, president-elect, Lieut. Colonel Robert G. White, and Stewart Thompson, managing director.

The Board of Governors of the Association held a meeting on Sunday, February 28, at 11 a.m., at the George Washington Hotel in Jacksonville. Many items appeared on the agenda, two of which were of unusual interest. It was decided to advance the date of the Florida Medical Journal one month. There will, therefore, be no Journal dated March. The reason is obvious, as explained in an editorial in this issue. A proposed amendment to Article XV of the Constitution of the State of Florida, relating to public health, had been referred to the Board of Governors by the members of the State Board of Health. It was decided to adhere to the action of the House of Delegates as published in the June, 1942 Journal. Members present were Drs. Louie Limbaugh, chairman, Gilbert S. Osincup, Shaler Richardson, Walter C. Jones, J. S. Turberville, W. C. Payne and Elmo D. French. Those attending in an advisory capacity were Drs. Eugene G. Peek, president-elect; Edward Jelks, delegate to the A.M.A.; J. C. Dickinson, and Stewart Thompson, managing director. Members of the State Board of Health and the Health Officer had been invited to attend and participate in the discussions. Those present were Dr. Robert B. McIver, Mr. William Parr and Dr. Henry Hanson, State Health Officer.

Dr. H. E. Parnell of Miami announces the opening of an office for general medical practice at 710 N.W. 62nd Street. Dr. Parnell will continue as resident physician at the Sun-Ray Park Health Resort.

Dr. Joseph C. Bernstein of West Palm Beach, upon the invitation of the Medical Staff of the Morrison Air Field, recently gave a series of four postgraduate lectures in dermatology, illustrated by natural color lantern slides.

Recent visitors at the Association's headquarters in Jacksonville were Dr. John S. McEwan of Orlando, past president; Dr. Robert H. McGinnis of Jacksonville, past president and President Gilbert S. Osincup of Orlando.

Dr. L. M. Sutter of Orlando has been reported as having been cited in orders of commendation for bravery under fire and for service beyond the call of duty in North Africa. He was in one of the initial landing parties on the coast of North Africa on November 8. Dr. Sutter enlisted in the spring of 1942.

JAMES McALLISTER ANDERSON

Dr. James M. Anderson of St. Petersburg died at his home on February 7, at the age of 68.

A graduate of the University of Pittsburgh Medical School, class of 1902, he first began the practice of medicine in his home state. He served on the staffs of the West Penn Hospital and the Pittsburgh Hospital in Pittsburgh.

He came to Florida twenty-three years ago, settling first at Sebring. Fifteen years ago he moved to St. Petersburg where he has since practiced his profession. He was a member of the staff of the Mound Park Hospital and of St. Anthony's Hospital. He was a member of the Pinellas County Medical Society, the Florida Medical Association and the American Medical Association. He was also a member of the board of the First Avenue Methodist church, a thirty-second degree Mason, a Knight Templar and a Shriner.

Dr. Anderson is survived by his wife, Mrs. Edna Alexander Anderson; two sons, Dr. Clyde O. Anderson, a lieutenant in the Army at Camp McCain, Mississippi, and George H. Anderson, a student at the University of Maryland Medical School; two sisters, Mrs. Eila Snodgrass of Pittsburgh and Mrs. Daisy Hanna of Wooster, Ohio; and a brother, Rex Anderson of Detroit.

COMPONENT COUNTY SOCIETIES

BROWARD

The Broward County Medical Society has reported 100% of its dues for 1943. Officers of this society are: Dr. David W. Harris, president; Dr. Robert Blessing, vice president, and Dr. O. C. Brown, secretary-treasurer.

COLUMBIA

Dr. J. E. Maines, Jr. of Gainesville was guest speaker at a meeting of the Columbia County Medical Society held on the evening of February 5. Dr. J. E. Maines of Lake Butler was also a guest at this meeting.

FRANKLIN-GULF

The Franklin-Gulf County Medical Society met Tuesday evening, February 9 at the Port Inn, Port St. Joe. Guests at this meeting were Col. Feraubaugh and Lieut. Thomas of Camp Johnston at Carrabelle, and Dr. Rochkind of Carrabelle.

JACKSON

At the meeting of the Jackson County Medical Society held on January 15, the following officers were elected: Dr. R. N. Joyner, Marianna, president; Dr. R. L. Miller, Graceville, vice president, and Dr. C. A. Adams, Jr., Marianna, secretary-treasurer.

NASSAU

The Nassau County Medical Society, youngest component of the Association, recently reported 100% of dues for 1943. Congratulations, Nassau County Medical Society.

PALM BEACH

The Palm Beach County Medical Society and the staff of St. Mary's Hospital held a joint meeting on the evening of February 15 at the hospital. Dr. Chevalier L. Jackson of Philadelphia, guest speaker, discussed "Direct Laryngoscopy and Bronchoscopy," illustrating his talk with slides. Refreshments were served.

PASCO-HERNANDO-CITRUS

Dr. J. T. Bradshaw of San Antonio was host to the members of the Pasco-Hernando-Citrus County Medical Society on Thursday evening, February 11. Dinner was served at the St. Charles Hotel, after which a scientific meeting was held. Several interesting cases were reported and discussed. Dr. G. R. Creekmore invited the society to meet with him in March.

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GYNECOLOGY—Two Weeks Intensive Course starting June 28; Clinical and Diagnostic Courses.

OBSTETRICS—Two Weeks Intensive Course starting April 19; Informal Course.

OPHTHALMOLOGY—Two Weeks Intensive Course starting Sept. 13.

OTOLARYNGOLOGY—Two Weeks Intensive Course starting Sept. 27.

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PINELLAS

The Pinellas County Medical Society held a dinner meeting at the Shrine Club on the evening of February 5. Dr. J. A. Mease spoke on "Mayfly Desensitization"; Drs. W. E. Quicksall and Paul White presented interesting case reports.

On February 19, the monthly round table assembly was held at the home of Dr. James A. Bradley. Military medical officers and nurses were guests at this meeting.

POLK

Dr. William Potts of the Hillsborough Tuberculosis Association was the guest speaker at a meeting of the Polk County Medical Society held at John's Restaurant, Bartow, February 10. The speaker gave an illustrated lecture on "Diseases of the Chest." Dr. Thomas G. Simmons of Auburndale, president of the society, presided over a short business session.

SEMINOLE

The Seminole County Medical Society met at the Fernald-Laughton Memorial Hospital in Sanford, February 9 at 7:30 p.m., in regular session. The meeting was called to order by President G. H. Putnam. The society took action to assess each member at home $3.75 for the purpose of paying the dues of members in military service. Dr. H. B Oertel's name was transferred to the roster of the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society. The Seminole County Medical Society is to be congratulated on its activities and the work of its officers.

VOLUSIA

On the evening of February 9 the members of the Volusia County Medical Society dined at Oleander Inn, Daytona Beach, and then went to the North Halifax Avenue home of Dr. George M. Green, where a round table discussion of surgical cases was held.

WALTON-OKALOOSA

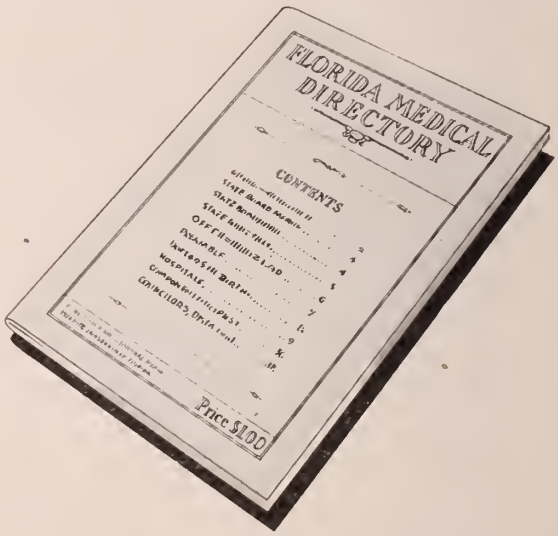
The Walton-Okaloosa County Medical Society is, as usual, among the first societies to report 100% of membership dues. Officers of this society are Dr. A. G. Williams, Lakewood, president; Dr. S. E. Stephens, Laurel Hill, vice president, and Dr. R. B. Spires, Defuniak Springs, secretary-treasurer.

WASHINGTON-HOLMES

The Washington-Holmes County Medical Society invariably reports 100% of its dues early in February, and this year was no exception. Dr. N. J. Dawkins of Vernon is president of the society and Dr. B. W. Dalton of Vernon is secretary-treasurer.



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ANNUAL MEETING

Dear Co-Workers:

Due to war conditions, we are streamlining our convention plans this year to correspond with those of the National Auxiliary.

There will be a preconvention board meeting at the home of the president, Mrs. F. W. Krueger, 1055 Arbor Lane, Jacksonville, on Thursday, April 15, at 1:30 p.m. A brief business session will follow at 2.p.m. at which time all state officers, committee chairmen, and county presidents will read their reports.

The board will meet again in the Ballroom of the George Washington Hotel, at 9:30 p.m., Thursday, April 15, in joint session with the Advisory committee of the State Medical Association, to draw up the charges for the Woman's Auxiliary for the coming year. This session will take the place of a fall board meeting and will enable the county auxiliaries to get well organized early in the year.

Mrs. J. W. Hayes, president of the Duval County Medical Auxiliary, Mrs. E. W. Veal, and Mrs. Charles F. Henley, will greet and welcome all visiting doctors' wives.

If you haven't already done so, please send your reports for the year to your state chairman so that you will get full credit for your work at the state meeting. County presidents are urged to send their reports to the state president. If you haven't sent in your state and national dues,

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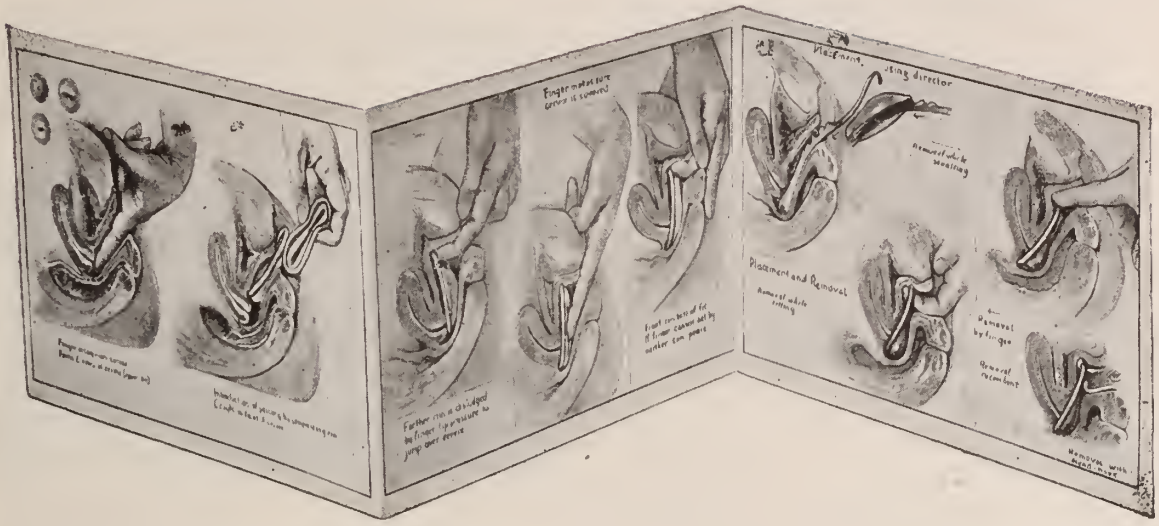
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please do so at once, as March 30 is the deadline. You are urged to send a delegate to represent your county auxiliary at the state meeting.

Let's hope that before another year passes the war will be over; until then may our interest in the war effort not diminish but continue to increase until the world is made safe for democracy.

I wish to express deep appreciation for your loyalty and support during the past year.

Sincerely,

Mrs. F. W. Krueger, *President*.

BOOKS RECEIVED

Acknowledgment of books received will be made in this column and this will be deemed by us a full compensation to those sending them. A selection will be made for review as expedient.

HOW TO LIVE IN THE TROPICS. By Virginia Lloyd Hunt. Here is the first American handbook to cover fully the practical problem of living in the tropics. It packs into a small space every kind of useful suggestion. The author puts into the book not only the result of her own experiences but that of doctors who have had many years of practice in tropical regions. She has had invaluable assistance from the health education departments of large organizations with field offices, and from staff members of the Rockefeller Foundation, Gorgas Institute, Pan American Union and Yale and Harvard Schools of Tropical Medicine. Cloth. Price, $2.00. Pp. 178. New York: Harcourt Brace and Company, 1942.

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STATE AND SECTIONAL MEETINGS

SOCIETY	PRESIDENT	SECRETARY	ANNUAL MEETING
Florida Medical Association	Gilbert S. Osincup, Orlando	Shaler Richardson, Jacksonville	Jacksonville, April 15-16, 1943
Florida Medical Districts:			
A—Northwest	Courtland D. Whitaker, Marianna	Stewart Thompson, Jacksonville	Tallahassee, Postponed
B—Northeast	L. Y. Dyrenforth, Jacksonville	" " "	Ocala, Postponed
C—Southwest	Edgar Watson, Lakeland	" " "	Sarasota, Postponed
D—Southeast	William Y. Sayad, W. Palm Beach	" " "	Miami, Postponed
Alabama Medical Association	H. B. Searcy, Tuscaloosa	D. L. Cannon, Montgomery	Birmingham, Apr. 20-22, 1943
Georgia, Medical Assn. of	James A. Redfearn, Albany	E. D. Shanks, Atlanta	Atlanta, May 11-14, 1943
Florida—			
Section, Am. College Phys.	R. H. Knowlton, St. Petersburg	Kenneth Phillips, Miami	To Be Announced
Dental Society, State	A. Malcolm Smith, D.D.S., Tampa	H. L. Cartee, D.D.S., Miami	To Be Announced
Derm. and Syph., Soc. of	Wiley M. Sams, Miami	Lauren M. Sompayrac, Jacksonville	To Be Announced
East Coast Medical Association	T. C. Kenaston, Cocoa	I. M. Hay, Melbourne	Postponed
Hospital Association	Mr. Ernest G. McKay, Tampa	Mr. R. L. Martin, St. Petersburg	Tampa—Postponed
Industrial Surgeons, Assn. of	Frank D. Gray, Orlando	Richard H. Walker, Orlando	To Be Announced
Medical Postgraduate Course	Turner Z. Cason, Jacksonville	Chairman	
Nurses Association, State	Mrs. Ann Thompkins, Leesburg	Miss Madalee Hazel, St. Petersburg	
Ophthal. & Otol., Soc. of	Shaler Richardson, Jacksonville	C. E. Dunaway, Miami	To Be Announced
Pathological Society	L. Y. Dyrenforth, Jacksonville	Iva C. Youmans, Miami	To Be Announced
Pediatric Society	Ludo von Meysenbug, Daytona B.	Robert Blessing, Ft. Lauderdale	To Be Announced
Pharmaceutical Association, State	Mr. H. B. Douglas, Bonifay	Mr. R. Q. Richards, Ft. Myers	Miami, To Be Announced
Public Health Association	W. H. Pickett, Jacksonville	Lloyd N. Harlow, Jacksonville	Postponed
Radiological Society	John N. Moore, Ocala	Walter A. Weed, Orlando	To Be Announced
Railway Surgeons' Association	Frank D. Gray, Orlando	W. C. Page, Cocoa	To Be Announced
Tuberculosis & Health Assn.	Mrs. M. M. Ebert, Lake Wales	Mrs. May Pynchon, Jacksonville	Jacksonville, May, 1943
Chattahoochee Valley Med. Assn.	Herbert E. White, St. Augustine	Robert B. McIver, Jacksonville	Postponed
Gulf Coast Clinical Society	G. G. Oswalt, Mobile, Ala.	C. L. Rutherford, Mobile, Ala.	Postponed
S.E. Sec., Am. Cong. Phys. Ther.	John J. McGuire, Pensacola	Kenneth Phillips, Miami	
Southeastern Surgical Congress	Alton Ochsner, New Orleans	B. T. Beasley, Atlanta	Postponed
Southern Medical Association	Harvey F. Garrison, Jackson, Miss.	Mr. C. P. Loranz, Birmingham	To Be Announced
Suwannee River Medical Society	L. J. Arnold, Jr., Lake City	H. S. Howell, Lake City	

COMPONENT SOCIETIES BY DISTRICTS

	SOCIETY	PRESIDENT	SECRETARY	MEETING DATE	MEMBERS Total	MEMBERS Paid	COUNCILOR
A	Bay	J. Powell Adams, M.D. Panama City	J. O. Barfield, M.D. County Health Unit Panama City		13	11	
	Escambia *Santa Rosa	Alvyn W. White, M.D. 24 W. Chase St. Pensacola	Lee Sharp, M.D. 24 W. Chase St. Pensacola	2nd Tuesday 8:00 P.M.	52	47	A-1-43 C. D. Whitaker, M.D. Marianna
	Franklin-Gulf		J. R. Norton, M.D. Port St. Joe	3rd Tuesday Odd Months	5	3	
	Jackson *Calhoun	R. N. Joyner, M.D. Marianna	C. A. Adams, Jr., M.D. Marianna	2nd Tuesday 7:30 P.M.	13	12	
	Walton-Okaloosa	A. G. Williams, M.D. Lakewood	R. B. Spires, M.D. DeFuniak Springs	3rd Thursday 8:00 P.M.	6	100%	
	Washington-Holmes	N. J. Dawkins, M.D. Vernon	B. W. Dalton, M.D. Vernon		6	100%	
	Columbia *Baker, Hamilton	Harry S. Howell, M.D. Blanche Hotel Annex Lake City	Thomas H. Bates, M.D. Blanche Hotel Annex Lake City	1st Monday 7:30 P.M.	12	9	A-2-44 William D. Rogers, M.D. Chattahoochee
	Leon-Gadsden-Liberty-Wakulla-Jefferson	James W. Sapp, M.D. Havana	B. A. Wilkinson, M.D. Telephone Bldg. Tallahassee	Quarterly 8:00 P.M.	41	25	
	Madison-Suwannee	Eustace Long, M.D. Madison	E. D. Thorpe, M.D. Madison		8	3	
	Taylor *Dixie, Lafayette	J. C. Ellis, M.D. Perry	Chas. A. O'Quinn, M.D. Perry	Last Friday 8:00 P.M.	5	0	
B	Alachua *Bradford, Gilchrist, Union	Geo. C. Tillman, M.D. 505 W. University Gainesville	Chester F. Ahmann, M.D. 1043 W. Masonic Gainesville	2nd Wednesday 7:30 P.M.	28	18	B-3-43 L. Y. Dyrenforth, M.D. Jacksonville
	Duval *Clay	T. Z. Cason, M.D. 2033 Riverside Ave. Jacksonville	F. A. Copp, M.D. 411 St. James Bldg. Jacksonville	1st Tuesday 8:15 P.M.	195	176	
	Marion *Levy	T. Hartley Davis, M.D. 202 Commercial Bk. Bldg. Ocala	B. F. Drake, M.D. Professional Bldg. Ocala	3rd Thursday 12:30 P.M.	29	27	
	Nassau	Geo. A. Dame, M.D. Fernandina	E. F. Waite, M.D. Fernandina	2nd Wednesday 8:00 P.M.	7	100%	
	Putnam	J. Worth Brantley, M.D. Grandin	C. M. Knight, M.D. Palatka	2nd Tuesday Even Months 7:00 P.M.	10	9	
	St. Johns	Alfred W. Norris, M.D. Flagler Hospital St. Augustine	Charles C. Grace, M.D. East Coast Hospital St. Augustine	3rd Tuesday 8:30 P.M.	12	4	
	Brevard	G. E. Christie, M.D. Box 151 Titusville	I. K. Hicks, M.D. Melbourne	3rd Wednesday	11	100%	B-4-44 Meredith Mallory, M.D. Orlando
	Lake *Sumter	Louis R. Bowen, M.D. Eustis	R. H. Williams, M.D. Eustis	1st Thursday 12:30 P.M.	18	13	
	Orange *Osceola	T. E. McBride, M.D. Apopka	John A. Pines, M.D. 106 E. Central Ave. Orlando	3rd Tuesday 5:30 P.M.	93	73	
	Seminole	Geo. H. Putnam, M.D. Touchton Bldg. Sanford	Leland H. Dame, M.D. Co. Health Unit Sanford	2nd Tuesday 5:30 P.M.	11	10	
	Volusia *Flagler	L. von Meysenbug, M.D. Box 3356 Daytona Beach	R. L. Miller, M.D. 258½ S. Beach St. Daytona Beach	2nd Tuesday 7:30 P.M.	44	32	
C	Hillsborough	T. C. Maguire, M.D. 104 S. Collins St. Plant City	James S. Grable, M.D. 811 Citizens Bldg. Tampa	1st Tuesday 8:00 P.M.	104	80	C-5-44 Leland F. Carlton, M.D Tampa
	Manatee	M. M. Harrison, M.D. Professional Bldg. Bradenton	L. W. Blake, M.D. Bradenton	3rd Tuesday 7:00 P.M.	14	100%	
	Pasco-Hernando-Citrus	W. W. Jones M.D. Dade City	G. R. Creekmore, M.D. Brooksville	2nd Thursday 7:00 P.M.	11	7	
	Pinellas	W. C. McConnell, M.D. 313 First Federal Bldg. St. Petersburg	Annette M. Feaster, M.D 166 Fourth Ave. N. E. St. Petersburg	1st and 3rd Fridays 6:30 P.M.	103	96	
	Sarasota	O. H. Cribbins, M.D. 138 N. Link Sarasota	A. O. Morton, M.D. Commercial Court Sarasota	2nd Tuesday 8:30 P.M.	20	10	
	DeSoto-Hardee-Highlands-Charlotte-Glades	M. C. Kayton, M.D. Wauchula	C. H. Kirkpatrick, M.D. Box 454 Arcadia	Quarterly	20	100%	C-6-43 Edgar Watson, M.D. Lakeland
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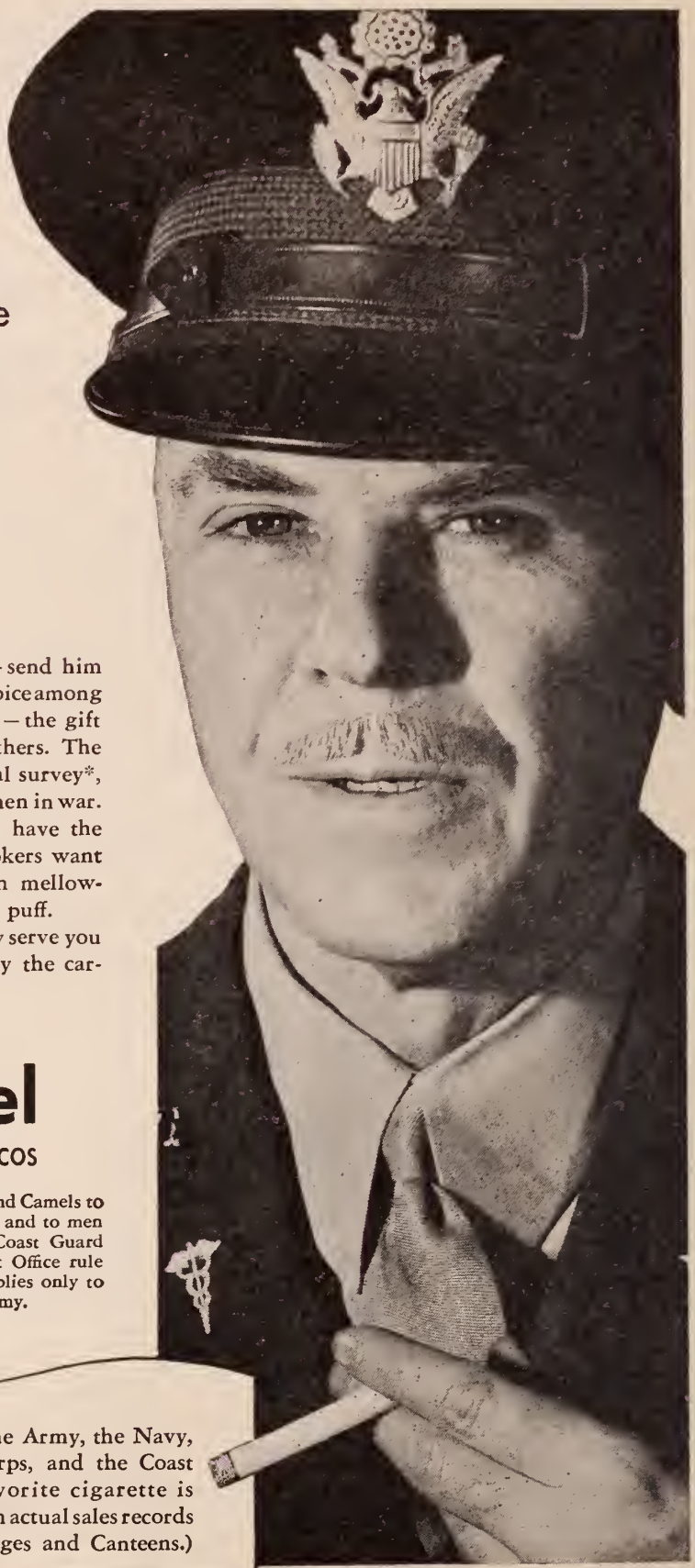
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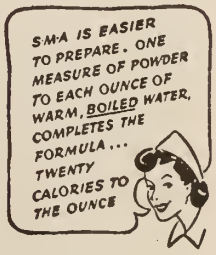
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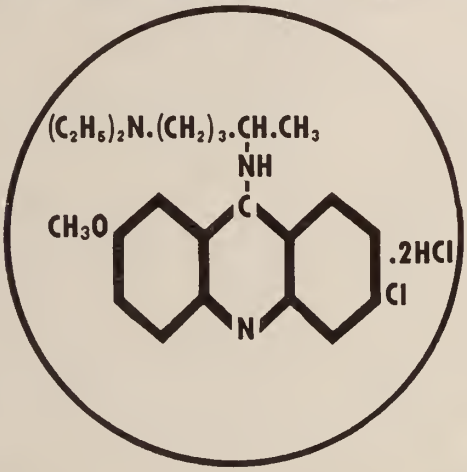
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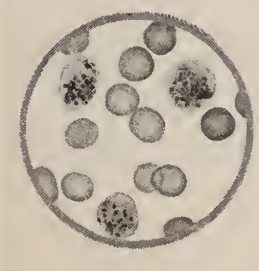
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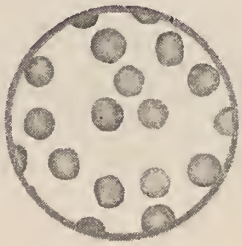
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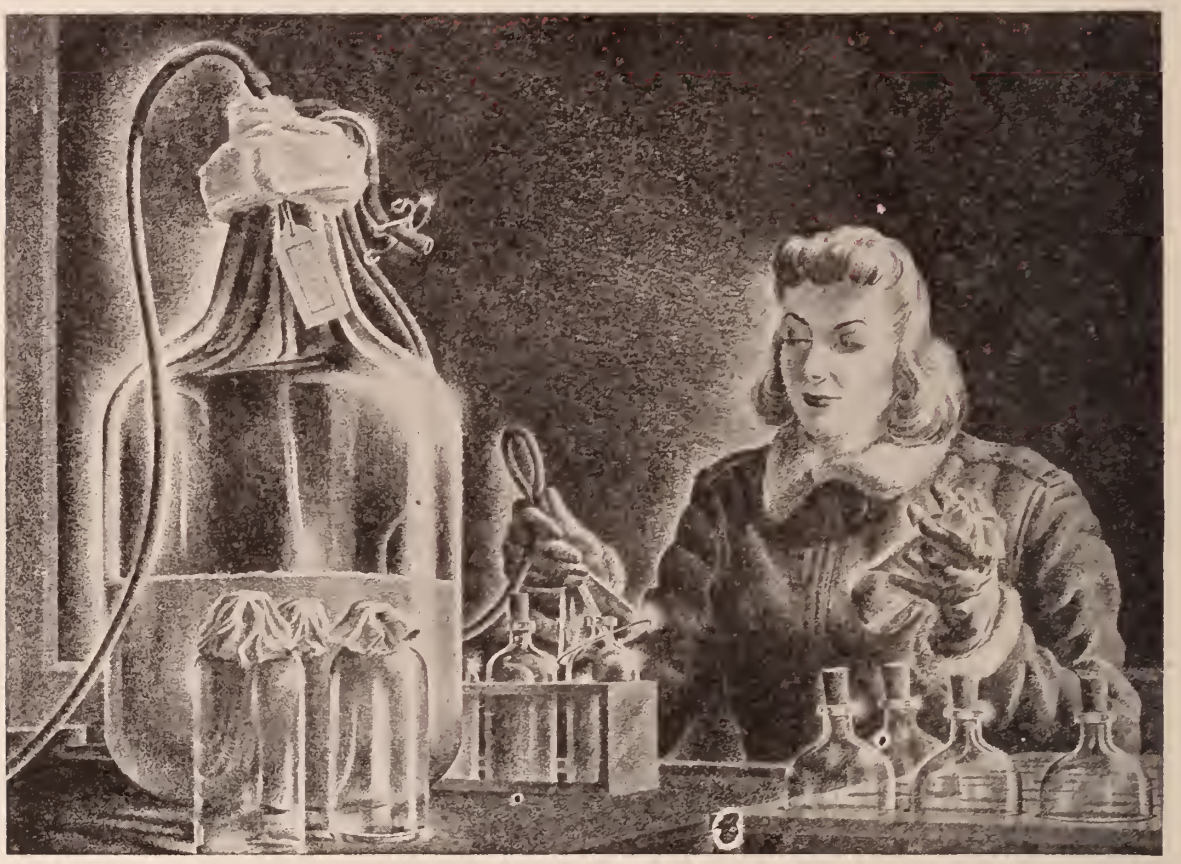
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CHANGING TRENDS IN MANAGEMENT OF THE MENOPAUSE

JAMES RICHARD COGAN, M. D.
MIAMI BEACH

Recent advances in endocrinology have contributed to a better understanding and improved management of the climacteric. By comparison one has but to review the older medical literature[1] relating to this condition and the interpretation of its physiopathology and treatment to appreciate the progress that has been made during the past decade.

Except for patients castrated surgically and by radiation,[2] in whom the syndrome differs mostly in degree and onset, the menopause normally appears at about the fifth decade and may cover the span of a decade. It is a definite and inescapable period of a woman's life, more often than not misunderstood and feared by her. Because she is ignorant of the causes of the sudden changes which have enveloped her body and mind, much good or great harm may be done depending on the manner in which the condition is managed.

PHYSIOPATHOLOGY

With the physiologic disappearance of menstruation, there is set up a period of psychosexual upheaval and emotional irritability at a time when the autonomic nervous system is unstable and vulnerable. Or, noting her fading beauty and loss of sexual attractiveness, the patient is slowly beset by fears, phobias, neuroses, boredom and anxiety. Greenblatt[3a] pictured this period in a woman's life as one of introspection, of recalled unfulfilled ambitions, of inventories, self analyses and secret fears.

With the atrophy of the gonads, there is a disappearance of estrogen and progesterone incident to the diminution in number and replacement of the graafian follicles by connective tissue. The changes due to the withdrawal of these hormones are manifested by atrophic and degenerative changes throughout the entire body, but particularly in the accessory organs of reproduction. The loss of these hormones, and more especially the estrogen, now results in an attempted compensatory hyperactivity of the anterior lobe of the pituitary gland and the various hormones which it may elaborate. It is believed that this lobe of the hypophysis, released from the inhibitory action of the ovaries, undergoes hyperplasia with the production of excessive amounts of the gonadotropic hormone.[4a, 5a, 6a] There may be an increase in the basophilic diabetogenic factor with the production of the recently recognized menopausal diabetes, as pointed out by Mazer, Israel and Ravetz,[7a] a disturbance of the adrenotropic factor with virilism,[8] or an increase of the thyrotropic factor with hyperthyroid changes, recently noted by Wohl and Pastor,[9] and Goldman, Goldman and Kurzrok.[10] The tremendous number of possible endrocrinopathies resulting from endocrine imbalance and their attendant symptoms have been described by me in an earlier communication.[11]

DIAGNOSTIC CONSIDERATIONS

A classification based on symptomatology would be of little significance and aid to the clinician. Therapy embracing correction of the underlying physiologic disturbance should be the first choice in treating cases of this type.[12, 13] Of the systems involved, complaints and symptoms are traceable to disturbances primarily of (1) the endocrine glands, (2) the autonomic nervous system, (3) the cardiovascular system, (4) the gastrointestinal system and (5) any combination of them. Menorrhagia, for example, may be due to hypothyroidism as well as to excessive gonadotropic secretion; weakness may be of cardiovascular origin, or perhaps based on an accompanying hypoovarianism, hypothyroidism, hypopituitarism, or hypoadrenia.

It is important that there be a thorough analysis of the symptoms before a diagnosis is made and therapy is instituted. Physicians still treat too many patients as menopausal in whom only an imbalance of the autonomic nervous system exists.[14] There may, however, be a combination of true menopause and imbalance of the autonomic nervous system.[3a] The patient may have avitaminosis in combination with the symptoms described, or with accompanying other endocrine imbalance. Failure to arrive at a proper diagnosis frequently explains the poor results of assumed physiologic therapy, or the good results of now proved impotent medicinal preparations when given in conjunction with mild sedatives and psychotherapy.[15] It is believed that for optimal

amelioration of the true menopausal syndrome the excessive production of the gonadotropic hormone must be inhibited.[10] In accordance with this reasoning, any therapy which fails to accomplish this is, a priori, unphysiologic.

Objective Findings—In addition to a painstaking history and a complete examination, there still remain most pertinent objective data to clinch the diagnosis of a true menopause. These data are obtained from the vaginal smear,[17a, b, 3b, 18a] vaginal hydrogen ion concentration,[19] vaginal biopsy,[18a] and the estrogen and gonadotropin assays.[11] Performing a biopsy and obtaining assays require considerable technical training and are time-consuming. Their results, however, tend to corroborate the other findings. The tissue may reveal extreme atrophy of the epithelial layer; the assays, with exceptions, will show a diminution in the excretion of estrogen, whereas the excretion of gonadotropin increases to as much as 250 rat units in twenty-four hours.

Vaginal Smear—Interpretation of the vaginal smear is highly important. The technic for obtaining this smear is simple. The outer third of the vaginal wall is gently brushed with a moistened wooden tongue depressor or cotton-tipped applicator, and the secretion thus obtained is smeared on a glass slide. The slide is stained with any analine dye for from two to fifteen seconds and then washed with tap water, after which it is read under the microscope without drying. I have used both methylene blue and dilute aqueous carbol fuchsin for stains.

In interpreting the vaginal smear or spread, one attempts to grade it in terms of "plus one," or the menopausal type, to "plus four," the full estrogenic type. It is now recognized that the vaginal mucosa, like the endometrium (and even the breasts), undergoes cyclic changes, whose smear characteristics present a predictable microscopic picture. The pioneer papers of Papanicolaou[17a] and Papanicolaou and Shorr,[17b] and more recently those of Greenblatt,[3b] simplify this study.

In the problem at hand, evidence of hypoestrogenism, the "plus one" or the menopausal smear, is seen in the preponderance of small, round, well stained basal or deep cells with large vesicular nuclei, the presence of other cells of the infantile and atrophic cell types, many leukocytes and other normal bacteriologic and biologic components.[20] This is in contradistinction to the estrogenic or hyperestrogenic "plus four" smear with its preponderance of large, flat, somewhat rounded epithelial cells and their deep-staining cytoplasm and pyknotic or absent nuclei. Variations in these two types are dependent on the day of the cycle on which the smear was obtained, the height of the epithelial layer, the amount of estrogen being secreted by the ovaries and made available to the vaginal mucosa, the possible extraneous sources of estrogen or androgen, which latter may produce an estrogenic-like effect,[18a, 6b] and by the presence of intercurrent vaginal injection.

Vaginal Hydrogen Ion Concentration—The vaginal hydrogen ion concentration tends to approach the alkaline side.[19] The explanation lies in the fact that the vaginal reaction is also under hormonal control. Estrogens control the glycogen deposit in the vaginal epithelial cells, and it is the breakdown of this glycogen into lactic acid by the Döderlein bacilli and other normal flora in the vagina[21a] which creates the normal vaginal hydrogen ion concentration of 4 to 5. If estrogen function is depressed, as it is in the menopausal patient, there is an insufficient amount or no glycogen deposited in the remaining basal cells of the vaginal mucosa. These circumstances together with the presence of an alkaline cervical secretion permit a higher vaginal hydrogen ion concentration. In those cases of the menopause accompanied by an acid vaginal reaction, the explanation may lie in the presence of unequal hormonal stimulation of the epithelial layer of the vaginal mucosa, so that glycogen may be present in some of the cells. The presence of putrefactive bacteria, too, may be responsible.

THERAPY OF THE MENOPAUSE

In the management of the true climacteric, employment of estrogens is the choice physiologic approach.[22] It is now believed that the symptoms of the menopause are, for the most part, the result of overactivity of the anterior lobe of the hypophysis, a sequence to the existing hypoovarianism. As one author[23] cryptically pointed out, the pituitary gland has escaped from its ovarian chaperonage, and the problem has become one of harnessing it.

NATURAL ESTROGENS

The estrogens should be properly selected as to potency, rate and degree of absorption and excretion, and should be administered in adequate amounts over a sufficient period of time to attain the following:

1. Inhibition of hyperpituitarism caused by increased activity of the anterior lobe of the pituitary gland.
2. Restoration of an acid vaginal reaction.
3. Production of an estrogenic response in the vaginal spread.
4. Subjective and objective clinical improvement.

It is the aim to maintain the patient with a minimum of discomfort. Every effort should be made to restore normal physiologic balance so far as this is possible. Here again the vaginal spread finds most useful employment; with rare exceptions, it provides a rapid, simple and approximate method for evaluating the efficacy of the administered estrogens and serves as a guide to the regulation of doses.[17b, 3b, 18a]

Of the naturally occurring estrogens, the estrones and estradiols are initially the most beneficial. In those instances in which there has been no previous hormonal therapy and the climacteric symptoms are pronounced and unpleasant, the estrones may be used to greatest advantage because of their rapid absorption and quick action. They are so rapidly excreted, however, that permanent alleviation of symptoms requires frequent administration. Because of their greater potency and prolonged effect, the estradiols are more effective. Of these, the alpha estradiol benzoate is the most potent, but compared to the estradiol dipropionate, it, too, is absorbed and excreted too rapidly.

After the condition has been controlled according to the criteria outlined, an effort should be made to reduce the dosage and gradually substitute oral or some other convenient form of therapy. Among the newer preparations, the sublingual absorption of estradiol benzoate in propylene glycol,* one drop nightly, has proved satisfactory in a large number of my experimental cases. Of the preparations strictly for oral administration, estriols in liquid or tablet form are available. Due to their inadequate absorption from the gastrointestinal tract, these have only been useful when small amounts of the hormone are required. Estrogenic vaginal suppositories,[7b, 24] particularly the estradiols, may benefit patients with senile vaginitis or nonspecific bacterial vulvovaginitis,[24, 21b] and even those with Trichomonas vaginalis accompanying a mild climacteric syndrome. For youthful patients castrated surgically there appears to be promise in the recent work of implanting estrogen pellets.[25, 6c]

SYNTHETIC ESTROGENS

Of the synthetic estrogens, diethylstilbestrol, after extensive laboratory and clinical investigation, has recently been placed on the market. First reported on as to its estrogen activity three years ago,[26a, b] this synthetic product bids fair, at least for the present, to challenge the place of natural estrogens as the ideal drug in the therapy of the natural or artificial menopause.[27a, 28, 29a, 30, 31, 32, 5b]

Diethylstilbestrol possesses definite advantages over the natural estrogens which render it preferable to them. These advantages are:

1. It is a potent estrogenic substance.
2. It is cheaper.
3. Its absorption from the gastrointestinal tract as a capsule, tablet, or in propylene glycol,* dissolved under the tongue is efficacious.
4. Daily administration of small doses will more closely approach the patient's normal physiologic estrogen level.
5. Its absorption from the vagina in suppository form is excellent.*
6. Recent work with pellet implants has shown slow absorption over a long period of time with excellent estrogenic effects.

Nevertheless, there are reported disadvantages and possible hazards associated with the use of even the smallest efficacious amounts of this drug.[28, 33, 34a] Several groups of workers, among them Greene and Dorr,[35] Mazer, Israel and Ravetz[7a] and MacBryde, Freedman and Loeffel,[29b] were convinced that there is a direct correlation between the size of the dose, the rapidity of absorption and the incidence of toxic reactions. Lamar,[36] with his wide experience in the use of the drug, concurred with this view, but expressed the opinion that in some patients an idiosyncrasy to this synthetic product exists which makes even the most minute dose intolerable. The smaller the efficacious dose and the slower the absorption, when it is given parenterally, the more infrequent is the reaction. There is, however, justifiable disagreement on this point.[27b] Parenterally, the esterified form, stilbestrol dipropionate, is more slowly absorbed than the free diethylstilbestrol. Often uncontrollable nausea and vomiting, general malaise, dizziness and diarrhea occur. There may be uterine hemorrhage during the period of treatment or on temporary discontinuation of the drug, and also alarming secondary anemia.[27a, 28, 37] There is the possible danger of thrombocytope-

nia.[20a] It is still unproved whether in the human being the liver may undergo fatty degeneration and necrosis.[37] Existing opinion maintains that this drug should be used with caution and administered by mouth only, or not at all.[38]

ANDROGENS

In the last few years, the androgens, and in particular testosterone propionate,* have proved of unusual benefit in certain menopausal cases. Prolific investigations of these substances have been concerned with their chemistry. Physiologic and clinical aspects have been enthusiastically pursued, and in the past few months thorough reviews of their role in gynecology have been published.[18b] In the treatment of a number of different types of menopausal cases androgens have proved superior to the natural or synthetic estrogens.[39] They include those cases in which

1. Estrogens are not only ineffective but actually aggravate the menopausal symptoms.
2. There is a true menopausal syndrome without accompanying evidence by vaginal smear.[6d, 4b]
3. A true menopausal syndrome occurs in the cyclically menstruating woman.
4. Uterine bleeding occurs during or after employment of the estrogens.
5. Mastopathy or mazoplasia develops after estrogenic therapy.
6. There is a previous history of mastectomy for mammary carcinoma.
7. There is a family history of cancer.
8. Chronic cystic mastitis is present.
9. Functional uterine bleeding occurs.
10. There is diminished libido.

Organic causes of abnormal uterine bleeding accompanying the menopause must be ruled out before using this hormone.[40, 41, 42] It is unquestioned that the androgens as a group are arrhenomimetic, and that of these testosterone propionate is both arrhenomimetic and estromimetic, the latter in restricted dosage. The arrhenomimetic effects far offset any estromimetic effect, and they may be of value because of their ability to inhibit pituitary activity, to stimulate the libido and to inhibit functional uterine bleeding by producing atrophic changes in the uterine wall.[16] There are workers who believe that when there is definite estrogen deficiency, androgens take over an estromimetic effect. In support of this stand, there has been noted an increased excretion of estrogens following the administration of androgens.[18b] The latter may, however, be evidence that the androgens have prevented the utilization of the body's estrogens.[16] Perhaps the metabolism of the sex sterols is so altered that in the woman deprived of estrogen, administered androgens are somehow converted into estrogens. Whatever the mechanism, the role of the androgens in the woman experiencing the climacteric is limited and not too well understood. Until that role has been definitely proved, they must be employed with caution.

Testosterone propionate will relieve most of the menopausal symptoms,[18b] inhibit hyperpituitarism due to pathologically increased activity of the anterior lobe of the pituitary gland and suppress the excessive secretion of the gonadotropic hormone. It will not restore the involutional changes of the genital tract to normal; it will not stimulate the glycogen metabolism of the vaginal epithelium with possible relief of an atrophic vaginitis or restore the vaginal acid hydrogen ion concentration. Rather, it will tend to elevate the hydrogen ion concentration. There still remains a difference in clinical observations as to the efficacy of this hormone to convert the castrate smear to a full estrogenic one.[34b, 43]

That the initial use or substitution of the male sex hormone for the natural or synthetic estrogen is not without danger is universally recognized. Injudiciously employed, it produces certain resultant by-effects, mainly arrhenomimetic in character, which will be of greater torment than the menopausal syndrome itself.[44, 18c, 6e, 42, 45] There may result the following: hoarseness, hypertrichosis, hirsutism, acne, congestion and hypertrophy of the clitoris, increased libido, atrophic vaginitis and rapid gain in weight. Control of these arrhenomimetic effects demands close observation as to total dosage, a consideration of the individual patient's tolerance and age, and the possible inherent tendency toward virilism. Geist, and Geist, Salmon, Gaines and Walter[18b, d] showed that if the dosage of the androgen is kept below 300 mg. per month in divided doses, these undesirable effects seldom occur. It has been the observation of several that lower doses should be given to brunettes. Those who would employ the male sex hormone in women must be accurate in their observation of the patient, with an eye to the masculinizing signs, and must grade the dosage in accordance with the changes shown in the vaginal spread.

Methods of administration of the androgens in the cases in which this therapy is indicated are, for the most part, similar to those employed for the estrogens; they are peroral, parenteral and by the implantation of pellets. Clinical results have demonstrated that whereas subcutaneous implants may slough out, better results are obtainable by the recent work in subfacial implants.[3c, 16] Small doses of testosterone propionate thus placed are slowly absorbed over a period of from twelve to eighteen months. The advantage of this method over constant parenteral administration of the hormone is obvious; the disadvantage, however, lies in the difficulty of controlling the rate of absorption.

In those cases of androgen implant in which there has been or exists as a sequence an increased and abnormal libido, progesterone administered orally, parenterally, or perhaps better still also as an implant, will rectify and stabilize the resultant nymphomania.[3c]

SUMMARY

1. The true menopausal symptoms are believed due to hypoovarianism and hyperpituitarism.

2. Imbalance of the autonomic nervous system may give rise to a syndrome resembling the menopause, or occur as a result of it.

3. A diagnosis of the menopause should be substantiated by objective data, namely, the castrate vaginal spread and an alkaline vaginal hydrogen ion concentration; but the syndrome may be present without this evidence.

4. The assay of gonadotropin in a true menopausal syndrome will usually show an increased excretion.

5. The symptoms of a true menopausal syndrome will usually be alleviated by the judicious choice of estrogens, whereas those of imbalance of the autonomic nervous system will respond best to proper depressants and psychotherapy.

6. Diethylstilbestrol, a synthetic estrogen, has excellent estromimetic effects, is adequately absorbed on enteral administration and is not as costly as the natural estrogens. It should be used with caution because of the possibility of unpleasant side effects and toxic symptoms.

7. Of the androgens, testosterone propionate has proved of exceptional benefit in certain types of true menopausal cases and, with guarded dosage, will not give rise to arrhenomimetic changes.

8. Organic causes of bleeding in the menopause should be ruled out before employment of the androgens.

9. Subfacial implants of androgen pellets are superior to the subcutaneous implants; the latter are more liable to slough out.

10. Progesterone will nullify the development of an excessive lidibo following androgen therapy.

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LOCAL USE OF SULFONAMIDES IN OPEN WOUNDS

A REVIEW OF THE PRESENT STATUS

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In the beginning let it be said that the remarks contained in this paper are general in character, but expressive of a trend, the details of which could not be recited in the space allotted to this presentation.

During the years since 1935, when the first of the sulfonamide drugs was put into use, countless thousands of lives have been saved by their judicious use. At the moment research is being conducted at a feverish pace in the development of and search for new members of this important family of drugs. Time alone will tell how many more potent compounds will be produced for use in every field of medicine and surgery.

As with any other "magic" remedy, there is the natural tendency to use the sulfa-this or the sulfa-that as a cure-all before, perhaps, sufficient experimental work has been done to prove the value of the substance for the condition to be treated, or to determine the limit of safety for the patient in its use under the particular circumstances. The drug has not yet been discovered which is foolproof and to which an occasional idiosyncrasy will not be found to exist. Suffice it to mention such old stand-bys as quinine and arsenic, and to review the many warnings sounded in the literature against the possible toxic effects of the sulfonamides. This paradoxic phrase is included herein to emphasize the importance of using sulfanilamide and its derivatives only under personal supervision and control. The current literature abounds with reports of reactions from oral and parenteral use of sulfonamides when they are given over long periods. Then let physicians assume that a safety zone exists for their local use and apply them wherever indicated, but let them proceed with caution.

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The five presently available compounds in the order of their appearance are (1) sulfanilamide, (2) sulfapyridine, (3) sulfathiazole, (4) sulfaguanidine and (5) sulfadiazine.

Out of this group sulfanilamide and sulfathiazole are most commonly used in open wounds, though a considerable amount of experimental work is being done with sulfadiazine. Sulfathiazole has the greatest affinity for staphylococcic organisms, and sulfanilamide and sulfadiazine for streptococci. In mixed infections, or conditions indicating such, it is permissible to use a mixture of the two drugs.

The local action of any of these drugs is based on their bacteriostatic properties. In a given case the results depend on the following factors:

1. Sufficient concentration of the drug in the immediate environment of the bacteria.

2. The phagocytic defense of the tissues involved.

3. The concentration of the inhibitor substances formed in the serum or pus.

To satisfy the first requirement it is necessary to dust in a sufficient amount of the drug at the earliest possible moment, to prevent the liberation of toxins and discourage pus formation. The local effect of these drugs is from ten to twenty times greater than that produced by the strongest concentrations safely obtainable by oral administration. Also, it takes several hours to build up an adequate blood concentration. This may be aided, however, by the intravenous administration of sodium sulfathiazole. The full phagocytic response is obtainable only in healthy and undamaged tissues. Consequently, the second requirement is enhanced by thorough debridement. The concentration of inhibitor substances is prevented when pus formation is prevented; therefore, the satisfaction of the first two requirements will prevent the function of the third.

The local use of sulfanilamide and sulfathiazole has increased by leaps and bounds in the past few months, and its present status places it in the forefront, in line with other accepted methods for the prevention and treatment of infection. There can be no doubt that these drugs have greatly aided and simplified the prevention of infection in wounds and have proved valuable in the treatment of cases in which infection was already present. It must, however, be emphasized here that most authors agree that, magic as they are, they cannot and must not be substituted for sound surgical principles and good surgical repair. They are to be used as valuable aids following upon the work done where such surgical principles have been applied. To enumerate briefly, in elective surgery these principles are (1) standard, accepted methods of preparation, (2) gentle manipulations, (3) careful handling of tissues and (4) sound surgical judgment; and in traumatic wounds, they include (1) proper preparation of the wound and the patient, (2) thorough cleansing and debridement, (3) careful closure, and (4) adequate splinting to rest the injured part.

There is hardly a wound encountered wherein the judicious use of one of the sulfonamide drugs would be contraindicated because fortunately the dangers encountered and damage to the liver or kidneys are less likely to occur from local use than from systemic administration. The absorption from local use, except perhaps in the peritoneal cavity, is relatively slow and incomplete, the high concentration being in the wound itself, and there is little or no irritation. The majority of small wounds, such as deep abrasions or shallow lacerations, are seen to be dry and have very little, if any, inflammatory reaction surrounding the edges when the patient returns for a second visit following his injury, or operation, when sulfonamides were used. I have observed one property of these drugs, which has been confirmed in conversation with others, that there may be an excess accumulation of serous fluid and a delayed healing period in some large wounds or operative incisions even though no infection has developed. This has not been fully explained though it may be caused by the use of too much of the powdered drug in the tightly closed wound.

Sulfanilamide was first used intraperitoneally to aid the treatment of peritonitis. Now, along with sulfathiazole it has come into general use for local implantation in the abdomen for nearly every imaginable procedure. It may be used as an .8 per cent solution in normal saline, or it may be dusted in as a powder in a total amount of from 3 to 5 Gm. Larger quantities have occasionally been used with safety.

The orthopedic field, with the extensive wounds associated with compound fractures and the like, offers the greatest opportunity for the local use of the sulfonamides. Much work is being carried on in every orthopedic clinic in the country on the subject of the treatment of compound wounds, and also surgical wounds, by

the local implantation of sulfanilamide and sulfathiazole. There is not complete agreement as to the method of fixation of the bones in compound fractures, but the use of the sulfonamides seems to have met with full accord in every important orthopedic center. Reports of successful reduction of infected wounds following this method of treatment continue to crowd the surgical journals. For use in orthopedics and in cases of extensive trauma without bone involvement sulfathiazole would seem to be the favorite, because in wounds

1. It is less soluble.
2. The rate of absorption is slower.
3. Most important, it is more active against the staphylococcic organisms and probably the anaerobes, which organisms are most commonly encountered in such wounds. A mixture of sulfanilamide and sulfathiazole may be used.

Sulfonamides are now widely used in minor operations and injuries of all sorts, such as are treated in the outpatient department of hospitals and in physicians' offices. Many hospitals and clinics have adopted the routine use of sulfanilamide or sulfathiazole for the treatment of all wounds, major or minor, accidental or surgical, and the reports indicate that the incidence of infection has been lowered as much as 25 per cent or more, as compared to its incidence with previous forms of treatment. A few of the minor conditions amenable to this treatment are skin infections, lacerations prior to closure, boils and carbuncles, infections of the hand and tendon sheath, infection in general, burrowing ulcers, pressure sores, infected burns and many more. It is also effective following operation for the removal of sebaceous cysts and foreign bodies, for nail wounds and in mastoid operations. Following the control of actual infection in the wounds, it is recommended that a sulfonamide ointment be substituted for the crystals so that the wound will not become too dry and hard, which often happens. I have long been using a small piece of vaseline gauze placed over the powdered wound before a dressing is applied. This seems to favor any drainage that may be present and it prevents excess dryness. I have not used the commercial ointment now being retailed because of the belief that there is not sufficient strength of the sulfonamide drug (usually 10 per cent) to permit of enough local concentration even in the presence of other drugs of antibacterial powers. It may be active for mild and superficial infections. Since all of the experimental and clinical evidence is based on studies made with the actual crystals, it is my opinion that when an ointment is to be used, it should be of 50 per cent strength in some bland base. It should be said that the sulfonamides seem to be compatible with almost anything for local use.

In closing, reference is made to the excellent study, made by Dr. Guy A. Caldwell of New Orleans, on the use of sulfonamides and zinc peroxide in the prevention and treatment of infection owing to gangrene caused by the gas bacillus. This study was reported at the meeting of the Southern Medical Association in November of this year. The experimental study was carried out on animals which were first injected through drill holes in the bones with the most virulent forms of organisms and were then treated according to plan. In addition to zinc peroxide, sulfanilamide, sulfathiazole and sulfadiazine were used for comparison in different groups. The results and conclusions from this experimental study I quote from a personal communication from the author, written under date of Dec. 1, 1941.

> In the control group of 85 animals the survival rate was 11.8 per cent. In the group of 60 animals in which the sulfonamide drugs were placed in the wounds and the wounds were closed primarily, there were 44 survivals, a rate of 73.3 per cent. All 20 of the animals which had immediate sulfathiazole and six-hour debridement lived, a rate of 100 per cent.
>
> The following conclusions were drawn from the experiments:
>
> 1. The effectiveness of surgical debridement in controlling the development and spread of gas gangrene has again been emphasized in these experiments.
> 2. Zinc peroxide as a local dressing in a severely contaminated wound has a definite inhibitory action upon the progress of gas gangrene.
> 3. The immediate implantation of one of the sulfonamide drugs will in the experimental animal inhibit the development of gas gangrene in most instances.
> 4. Once the organism has invaded the soft tissues and begun to spread, the effectiveness of sulfanilamide progressively decreases as time elapses between the period of inoculation and initiation of treatment.
> 5. On the basis of experimental evidence the local implantation of sulfathiazole at the scene of the accident is encouraged. Its use in a large series of clinical cases of compound fracture will determine its practical value.

The essence of this study is that sulfathiazole may have definite value in the prevention of gas gangrene in contaminated wounds. It has emphasized the early implantation of sulfonamides in all wounds, with the hope of setting up an adequate concentration in the wound before inhibitor substances have had an opportunity to

form and has directed attention to the importance of debridement. Much time might be saved if the drugs are routinely dusted into wounds that are first seen in the emergency room while the patient is being treated for shock and preparations being made for operation. It has been suggested that ambulances be equipped with these drugs for use by the ambulance surgeons at the scene of the injury. It has further been mentioned that it might be of value to supply a mixture of sulfanilamide and sulfathiazole in the first aid kits of soldiers in the field of battle, for immediate application to their wounds.

SUMMARY

1. A general review of the present status of the use of sulfonamide drugs in local wounds is offered.

2. Attention is called to the value of these drugs when used locally for the prevention and treatment of infection in wounds.

3. A warning is sounded that the sulfonamides are toxic drugs and while their toxic properties are more manifest when given systemically, caution should also be the rule when they are used locally.

4. A few of the conditions in which sulfanilamide and sulfathiazole may be successfully used are enumerated.

5. The need for proper preparation and debridement in traumatic wounds is emphasized, and sound surgical principles are listed in repetition for emphasis.

6. A short summary of and conclusions based on a study of the use of sulfonamides in the prevention and treatment of gas gangrene are quoted from a personal communication from the author of this report, Dr. Guy A. Caldwell of New Orleans.

416 Comeau Bldg.

PROCEEDINGS OF THE

SEVENTIETH ANNUAL MEETING

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DIAGNOSIS AND TREATMENT OF INJURY TO THE SPINE

HERSCHEL G. COLE, M. D.

TAMPA

In reviewing this subject it is my purpose to present the practical side of the diagnosis and treatment of injury to the spine. The ultra-scientific and didactic discussions, as well as descriptions of the minute anatomy, histology and pathology, can be found by anyone in a standard textbook and in other literature. The ideas presented are not original; they are merely the correlation of the accepted literature and the personal observations of the leaders in orthopedic work in the larger clinics.

In the majority of acute injuries to the spine fracture or dislocation or a combination of the two is involved. The greater part of this paper is devoted to a discussion of these features. The two major types of injury to the spine are those that produce pressure upon or injury to the spinal cord with a resulting paralysis below the level of the injury and those in which there is no involvement of the spinal cord. In order to make a diagnosis of the exact nature of an injury to the spine, one must correlate the history of injury, the symptoms and the clinical and roentgen observations.

SYMPTOMS

Shock—Any patient sustaining an injury to the spine sufficient to require the attention of a physician experiences some degree of shock, either minor or major in character. Attention should, therefore, first be directed to the treatment of this condition, which differs in no way from the treatment when the cause is of a different nature. Briefly, it consists of the administration of morphine except in the presence of associated head injuries, handling the patient gently and placing him on his back, the intravenous administration of glucose or saline solution and various other forms of treatment with which all are familiar.

Retention of Urine—In all injuries of the spine accompanied by paralysis there is persistent paralysis of the urinary bladder that constitutes one of the most serious and annoying features. In nonparalytic injuries the patient is usually able to void voluntarily within twenty-four hours. Patients who do not void within this time should be catheterized to relieve the distention of the urinary bladder as well as to determine whether or not there is renal injury.

Abdominal Injuries—In practically all cases of fracture or dislocation of a vertebra below the seventh or eighth dorsal segment, abdominal distention and distress occur within a few hours. Usually the explanation is that in the region of the injury there is hemorrhage of sufficient degree to extend to the retroperitoneal region and press upon or distend the sympathetic nerve trunk or fibers to the base of the mesentery, thus producing ileus. The abdomen is distended and tender, and the patient complains of cramplike pains. In many cases other indications are vomiting and rigidity of the abdominal wall as well as the absence of stools and scanty passage of gas. This type of fracture should always suggest the possibility of a ruptured abdominal viscus with an attending peritonitis.

When a patient with a spinal injury is hospitalized, a leukocyte count should be made immediately and repeated every three hours as it is a most valuable diagnostic aid in differentiating between a ruptured abdominal viscus and paralytic ileus. In the case of paralysis of the bowel the leukocyte count remains practically normal, whereas in that of a ruptured viscus with the beginning of generalized peritonitis the leukocyte count rapidly mounts to 20,000 or 30,000. The temperature follows a similar parallel. The treatment of ileus consists of the insertion of a Miller-Abbott tube into the bowel, the administration of morphine and pitressin, and various other recently developed procedures which are familiar.

TREATMENT

When the shock has been brought under sufficient control so that the life of the patient is not endangered by further examination, one should then immediately proceed to determine roentgenologically the exact location and extent of the injury. An early diagnosis is extraordinarily important. If a surgical release of pressure on the spinal cord is determined upon, the operation should be performed within three hours after the injury or as soon thereafter as the physical condition of the patient permits. In cases of injury to the spine accompanied by paralysis above and below the lesion, one is confronted with the problem of whether or not surgical intervention will be of benefit to the patient.

The etiology of paralysis may be defined in three general classifications, one in which the cord has been severed or partially severed, one in which physiologic block comparable to concussion of the brain occurs, and one in which there is pressure of bony fragments or edema. The spinal fluid is secreted in the lateral ventricles of the brain by the carotid plexus, and the pressure within the ventricles is directly reflected in the subarachnoid space where the spinal fluid circulates. If this circulation is not disturbed, one may assume that no pressure on the cord is present.

The Queckenstedt test is simple in performance and of extraordinary value in relation to the indication for surgery. An ordinary spinal puncture is done well below the site of the lesion. Infiltration of novocain at the site of the puncture should be carried out in order to avoid the recording on the manometer of an abnormal rise in the spinal pressure because of reflexes. With the patient continuing to lie on his side, an ordinary manometer is attached to the spinal puncture needle. Pressure is then applied over one or both sternocleidomastoid muscles at the angle of the jaw. This procedure compresses the jugular veins and causes an increase in the intracranial pressure, which by reflex action through the spinal column down through the spinal puncture needle into the manometer produces a steady rise in the spinal pressure if there is no block. The spinal cord is not closely adherent to its meningeal coverings, but is surrounded by a watery substance, the spinal fluid. Should the results of this test be negative, there is no indication for surgery, and it must be assumed that the paralysis is of the physiologic block type, or that there has been a definite injury to the spinal cord itself. Should the paralysis continue, this test should be repeated every twelve hours, and when it gives positive results a laminectomy should be performed at once.

SYMPTOMS OF SPINAL CORD INJURY

The chief symptoms of injury to the spinal cord are pains in the back at the site of the injury, probably due to pressure or to stretching of the posterior nerve roots, shock and complete or partial paralysis of all muscles below the site of injury together with loss of sensation. A zone of hyperesthesia is generally present, which in location corresponds to the level of the injury and is probably due to irritation of the roots of the nerves. All reflexes of the paralyzed muscles first become completely abolished and in a few days hyperactive; and, as previously mentioned, the retention of urine along with the abdominal

symptoms is usually present when the lesion is at or below the seventh or eighth dorsal segment.

DIAGNOSIS

When by roentgen and clinical examination a diagnosis of fracture or dislocation has been made, attention should then be turned immediately to the relief of the pressure upon the spinal cord, if such is present. Again I wish to repeat that the simple Queckenstedt test is invaluable in determining whether or not laminectomy is indicated. As the indication for this surgical procedure has long been a moot question, it is well to discuss for a moment the pathologic changes involved in injury to the cord. If the cord has been partially or completely severed, there is no surgical procedure that will help this condition. If on the other hand compressed portion of bone is causing constant pressure, it should be relieved. If due to contusion resulting in edema which occludes the spinal canal, the interference has already cut off the passage of the spinal fluid as indicated by a positive Queckenstedt test, then surgical interference is demanded. If, however, the results of this test remain negative, they indicate that the pressure at the site of the lesion is not great and that the injury is due either to physiologic block, which will be corrected spontaneously or to severance of the cord. In case the clinical observations indicate a decompression operation, it should be performed at once in the form of a laminectomy. The details of this operation need not be discussed, but when the spinal canal is open and by digital palpation the surgeon feels the pulsation of the spinal fluid at the site of the injury, he then knows that he has relieved the pressure. In case the pulsation cannot be felt, attention should be directed to the possibility that the location is wrong, or that the injury lies within the cord itself. The meningeal covering can be opened and the blood clots washed away; often some surgeons will make a sagittal incision into the cord itself. The wound is closed in the usual manner, and a bone graft is then unnecessary. There is nothing more disheartening to the attending physician than having to minister to a patient whose cord has been severed and who remains a hopeless cripple throughout life.

AFTER-CARE

Invaluable is the after-care of the patient who has sustained an injury of the spinal cord. The prevention and care of decubital ulcers, the paralyzed urinary bladder and also the weakness or paralysis of the rectal sphincter at times give difficulty. Decubital ulcers are trophic in character, and in treatment nothing is as specific as their prevention. All points of bony prominence should be protected by rubber rings or other appliances to prevent pressure.

In many cases of spinal injury fatal termination is primarily caused by infection of the urinary bladder which ascends up the ureter to the kidney and eventually leads to suppuration in one or both of these organs. Some physicians allow the bladder to become greatly distended and to overflow in the hope of creating an automatic bladder. Others place indwelling catheters, use intermittent catheterization, or resort to suprapubic cystotomy. I think it is generally accepted that the indwelling catheter, which is changed every three or four days, and routine irrigation of the bladder with a urinary antiseptic more or less constitute the accepted treatment.

RESULTS IN SPINAL CORD INJURIES

In injuries of the spinal cord resulting in permanent paralysis all procedure should point to keeping the patient comfortable until the end. Death usually occurs from urinary infection and is hastened by extensive sloughing of bed sores. Ordinarily cases terminate fatally after the first two or three days, or in from two to six months, but occasionally the period of survival is much longer. In cases in which there is only a partial injury to the spinal cord, many times partial recovery takes place. It occurs less often when the urinary bladder and rectal function are impaired, but in these cases the patients are often able to catheterize themselves and live fairly normal lives. Often there is a permanent partial paralysis which affects the normal activities of the extremities, but the patients are able to use crutches, wear braces or other orthopedic appliances and become economically independent.

FRACTURE OF VERTEBRAL PROCESSES

Fracture of vertebral processes which are not attended by fractures or dislocations in no way disturb the spinal cord, unless driven directly into the cord. These fractures do not interfere with weight bearing in the spine, but produce pain and discomfort out of proportion to the symptoms of the fracture. Early immobilization until healing is complete is the ideal treatment.

SPINOUS PROCESSES

A fracture of the spinous process is usually

the result of direct violence. There is immediate pain, and all movements of the back increase the discomfort of the patient.

TRANSVERSE PROCESSES

Fracture of transverse processes usually occurs in the lumbar region. It is often multiple in character and bilateral, and it is caused by direct violence or sudden lateral flexion of the trunk which tears off the process by means of a sudden muscular pull.

PEDICLES AND ARTICULAR PROCESSES

Fractures of the pedicles and articular processes are usually isolated fractures and generally occur in association with displacement of the vertebral bodies.

TREATMENT OF PROCESS FRACTURES

All types of process fractures are treated by immobilization in a plaster cast. The cast is worn for a period of four or five weeks.

COMPRESSION FRACTURE OF THE BODY OF A VERTEBRA

Frequently compression fracture of the body of a vertebra without attending neurologic symptoms is overlooked. As previously stated, when a fall occurs sufficient in character to fracture the os calcis one must immediately suspect the possibility of a compression fracture or fracture of one or more vertebrae by pressure and vice versa. Adequate roentgen studies in the anteroposterior, lateral and oblique positions should be made. The most common sites for this type of fracture are the last two dorsal and the first two lumbar vertebrae. It should be remembered that a patient with one or more compression fractures of the vertebrae may remain ambulatory. As a matter of fact it is not uncommon, subsequent to the use of metrazol, which has recently been used in the treatment of mental cases, for compression fracture of one or more vertebrae to occur as the result of the convulsive seizures produced by the use of this drug. Generally the period of impairment and the seriousness of a compression fracture of the body of a vertebra decrease as the site of the fracture advances superiorly.

TREATMENT OF COMPRESSION FRACTURES

The treatment of any back injury can best be instituted at the site of the accident. Careful, judicious and intelligent handling in moving a patient from the point of injury into an ambulance and from the ambulance into the hospital is important indeed. In athletics and football particularly, it is not uncommon to see a trainer or teammate place his hand upon the chest or some part of the spine of a player, pumping him up and down. Such action frequently severs the cord if it has not already been severed.

The primary purpose of treatment of a compression fracture of the vertebral body is to restore its normal anatomic position as well as its function. The patient should be placed upon some type of frame designed for hyperextension, the convexity of which can be increased from day to day. In about two weeks full correction is obtained, and an ambulatory body cast is then applied. If the patient is 45 or more years of age, this gradual correction is much safer than an early correction. There are various types of jacks and screws in manipulative apparatus whereby, with the patient properly anesthetized, many physicians correct the deformity immediately by manual replacement. By this method the patient is placed in a position of hyperextension with the convexity directed anteriorly, which tends to separate the fragments of the compressed body and also restores the normal alinement of the spine. By pressure over the affected vertebra one can often feel a crunching sensation upon reduction. There is practically no danger in this method as the anterior common ligament is firm, extends the entire length of the spine and prevents an excess of hyperextension. The next step is to apply a well padded cast that extends up to the suprasternal notch and below the pubis. Some orthopedists allow the patient to become ambulatory immediately. This cast is worn from three to four months; Taylor's apparatus, a steel brace for the spine, is then applied and worn for an equal period. Before removing all support one should carefully determine by roentgen examination that complete healing has occurred. All patients with a compression fracture of the body of a vertebra should be kept under observation for at least two years as often a degenerative process known as Kümmell's disease will develop.

INJURIES TO THE CERVICAL VERTEBRAE

Fractures or fracture dislocations of the cervical vertebrae less frequently injure the spinal cord than do such injuries to the other vertebrae as the cervical canal is relatively larger than the canal in the other regions and allows a wider latitude for bony displacement before the cord is injured. The most common injury to the cervical vertebrae not accompanied by paralysis is a unilateral dis-

location often accompanied by a fracture of the edge of the articular process. This dislocation consists of a slipping forward of one articular surface over the lower articular process combined with a twisting of the vertebral body. This deformity causes pressure on or stretching of the cervical nerve roots, which results in severe pain. In bilateral cervical dislocation both articular surfaces have slipped, and instead of the head being rotated to one side as occurs in unilateral dislocation, the neck is flexed forward.

TREATMENT OF CERVICAL DISLOCATION WITHOUT PARALYSIS

All methods of treatment of cervical dislocation when paralysis is not present are based upon the principle of disengaging the displacement of the articular processes by means of traction or manipulation or both. Subsequent to reduction the neck and head are incased in a plaster of paris jacket, or some cervical apparatus designed to produce hyperextension, for a period of from six to eight weeks.

SUMMARY

All falls causing a compression fracture of the vertebrae should be suspected also of causing a fracture of the os calcis.

An immediate series of leukocyte counts should be made in all vertebral fractures to determine or exclude the presence of a ruptured viscus.

The Queckenstedt test should immediately be employed in all cases of vertebral fracture in which neurologic signs are present.

Laminectomy should always be preceded by a positive Queckenstedt test and should be performed immediately as a degeneration of the cord starts within three hours and becomes progressively permanent.

Plaster casts for producing hyperextension should come well up to the suprasternal notch and below the pubis.

522 Citizens Building.

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INTRAVENOUS ANESTHESIA

BLAKE LANCASTER, M. D.
MANATEE

There is nothing, I think, that a man dreads so much as pain, unless it be death itself. When death is imminent, a last request often is, "Please do not let me suffer," and the granting of that last wish is insisted upon by relatives, even though they know it will hasten the demise. Everyone has experienced the discomfort of an aggravating tooth, and visits to a sympathizing dentist are put off only because of fear of pain.

Since the time of Dr. Crawford Long and Dr. Morton, who experimented successfully with ether, physicians have been in search of the perfect anesthetic agent. Disagreeable side effects, such as smothering, nausea, vomiting and gas pains, that attend the administration of an inhalation anesthetic, once experienced, are factors which militate against a similar experience, should anesthesia again be required. Numerous schemes have been worked out to overcome this dread, such as the use of hypodermic injections of morphine and hyoscine, and the giving by mouth of the various barbiturates, and with considerable benefit, as preliminaries. Ether was given with good effect by rectum, but the irritation which followed this method made its use short-lived. Avertin took its place as a basal anesthetic and was considered a decided improvement over anything previously used. Patients went quietly and easily to sleep in their rooms, with no knowledge that an anesthetic was being given. Side effects were greatly diminished, and this method of producing anesthesia has been and still is in much favor. Various new inhalation anesthetics have decided advantage over ether and chloroform for rapid action and quick recovery.

Intraspinal anesthesia at first gave promise of being the ideal for its limited application. The somewhat difficult technic of administration, the possibility of the effect not lasting through a tedious operation and some undesirable aftereffects, such as headache, weakness of the legs and possible paralysis of respiratory muscles, seemed to outweigh the wonderful advantages to the surgeon of perfect relaxation and left its use largely in the hands of specialists in well equipped hospitals.

There seemed hope that an intravenous anesthetic, prepared perhaps from barbituric acid,

Read before the Manatee and Sarasota County Medical Societies, May 26, 1942.

could be attained, and sodium amytal had a brief but stormy trial. Following its use patients were so difficult to control that its advantages were soon forgotten.

About 1935 evipal came into use as an intravenous anesthetic agent, and shortly afterwards pentothal sodium became a rival. These two drugs, similar in action, constitute the most desirable anesthetic agents I have ever used. Each is a nearly white crystalline powder, pentothal having a slightly yellow cast, and both are easily soluble in water. Given intravenously in doses of ½ to 1 Gm., they produce rapid and profound sleep to the surgical degree, and recovery is rapid once the effect of the drug is spent.

There are some minor differences in their action. For instance, I have noticed snoring, twitchings to the extent of a mild convulsion and dilatation of the pupil with evipal, none of which occur with pentothal sodium, which also seems to permit a much more peaceful recovery period than evipal.

If I were an oculist, instead of dilating pupils with atropine, which requires much time and discomfort, I should certainly use evipal, which acts quickly and permits rapid recovery.

These drugs are not very stable in solution and are mixed fresh for use within an hour or two. It has been my habit to dissolve 1 Gm. in 20 cc. of sterile water, or ½ Gm. in 10 cc., which makes a 5 per cent solution. Some prefer a 2½ per cent solution, considering that a weaker solution is more easily controllable. Of the stronger solution, 2 cc. is given intravenously, consuming about ten seconds' time; after one minute 2 cc. more is given; after a pause of about half a minute an additional 2 cc. is administered, and by the time 6 or 8 cc. of 5 per cent solution has been given, the patient is anesthetized to the surgical degree. The rest of the dose is injected slowly while the operation is in progress. Anesthesia reaches its height in about five minutes and remains so for about ten or fifteen minutes when a dose of ½ Gm. is given. An additional ½ Gm. may be administered if desired, but a greater amount is not recommended though some surgeons have given considerably more in combination with glucose solution for prolonged operations.

It is difficult in a 20 bed hospital, where facilities, material and time are limited, to do experimental work. Consequently, I have limited myself to use of the initial dose of ½ Gm. and have supplemented it with a small amount of chloroform when needed, and only a small amount is needed. The response to it is rapid. My experiences have been most happy. Evipal has been used about 200 times and pentothal sodium about 700 times, and I have not had a death from their use nor been in an extremity. On a few occasions artificial respiration has been resorted to for a brief period of time, and only once have I given metrazol as a respiratory stimulant. I use this type of anesthesia for practically all of my surgery. It is ideal for fractures, works well for a tonsillectomy (Sluder operation) and is excellent as a basal anesthetic for major work.

The first major operation in which I used evipal was an appendectomy performed in 1937 with Dr. Harris of Wimauma administering the drug. Removal of the appendix was accomplished promptly, and on further exploration an ovarian cyst about 5 cm. in diameter was found and removed. Closure was completed without the use of other anesthetic. Since then intravenous anesthesia has been my choice, and with others who have used it a great deal I believe that it is here to stay.

For minor work this form of anesthesia is used without regard to previous preparation, but when opportunity permits, the usual preoperative care is given. The night before the operation 1½ grains of nembutal is given by mouth, to promote rest and sleep. At 7 a. m. a similar dose is given, or ¼ grain of morphine and atropine. The patient is brought to the operating room at 8 a. m. Everything for the operation is in readiness; the drapes are applied with the patient still awake, and the injection is given, usually in the median basilic vein at the elbow, though sometimes in a prominent vein in the hand. Any vein will do, but veins of the lower extremities are least satisfactory as circulation seems to be much slower there than in the upper extremities. Two cubic centimeters of the solution is injected, and within a few seconds the patient who has been talking gaily will cease, become relaxed and flushed. It is necessary to support the jaw and maintain a free airway. A yawn is noticed if the drug has been given too rapidly. Color is always good, cyanosis is rare, and depth of respiration is the best guide to the amount of the anesthetic required. Respiration is always shallow. Blood pressure falls slightly, and the pulse rate is slow and regular. The pupils remain normal when

pentothal sodium is used and are dilated widely when evipal is employed. The corneal reflex is abolished, and occasionally soiling will occur from the rectum or bladder. Anesthesia is tested at the site of the incision with hemostats, and when it is complete, the operation may proceed.

Surgical anesthesia for a period of from ten to fifteen minutes may be expected in a 150 pound person from ½ Gm. of sodium pentothal. Mutterings and movements indicate that the patient is coming from under the effect of the drug. Patients never go back under; they always come further out, and a few drops of chloroform occasionally will maintain a satisfactory anesthesia for a prolonged operation. At the finish the patient wakes up as he went to sleep, without a struggle, and in the same happy frame of mind. He speaks coherently within a few minutes and sleeps lightly for several hours. Nausea and vomiting are rare indeed, as also are gas pains. Patients who have had this anesthetic, cheerfully take it if needed on another occasion. Embarrassed respiration constitutes the chief contraindication. I have not used it in very young children, but it has been satisfactory in patients whose ages ranged from 6 to beyond 80, and is particularly suited to the old and feeble, for whom an inhalation anesthetic would be most undesirable.

SUMMARY

In conclusion, I have found intravenous anesthesia to be most pleasant and safe. It is admirably suited to minor work and is a marvelous adjunct to major surgery. It should be used carefully by experienced men in a hospital where adequate recovery time is available (about six hours), and respiratory stimulants and oxygen are at hand.

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SPECIAL WARNING BULLETIN

SUBJECT: EPIDEMIC KERATOCONJUNCTIVITIS.

Incubation period—Five to ten days.

Clinical Manifestations—The onset may be preceded by a low fever and mild generalized malaise. The local ocular symptoms are merely those of a foreign body or conjunctival irritation. One eye is usually affected first, and in a large percentage of cases the second eye becomes infected within five to eight days. Preauricular and submaxillary glandular involvement with tenderness is common in a high percentage of cases.

Edema of the lids and the conjunctiva, especially the transitional fold, is frequent. The conjunctiva presents the appearance of a simple purulent conjunctivitis but with little or no formation of pus. Small areas of pseudomembrane are not infrequent and when removed leave either small white dotted points or some bleeding points. The bulbar conjunctiva becomes edematous early. At this stage, there is some lacrimation and photophobia, but real pain and blepharospasm do not appear until the cornea becomes involved.

The percentage of cases in which corneal involvement occurs varies from 50 to 90 per cent. In from six to twelve days after the conjunctivitis appears, the cornea becomes involved by the appearance of discrete gray infiltrates that lie in and immediately under the epithelial layer of the cornea. They may be confined to the periphery of the cornea but in a large percentage of cases involve the pupillary area of the cornea directly. These infiltrates are discrete and seldom become complicated by an erosion of the corneal epithelium with resultant staining with fluorescin. The extent of visual impairment depends upon the number of infiltrates and their location.

Clinical Course—The disease is self-limited. In the majority of instances, the conjunctivitis disappears spontaneously in from fourteen to eighteen days. The corneal complication may disappear in seven days or may last for many months. The longer they persist the greater is the danger of permanent visual impairment.

Laboratory Findings—Scrapings of the conjunctiva show a preponderance of monocytes. Cultures and smears are either negative or show the usual contaminations.

This statement has been prepared jointly by the United States Public Health Service and the Committee on Industrial Ophthalmology of the American Medical Association, for distribution to all physicans.

Treatment—There is no specific treatment that has shown a definite influence upon the course of the disease. During the acute stage the eyes should be kept clean with irrigations of boric acid, normal saline, or one to five thousand oxycyanid of mercury. If there is much photophobia, 1 per cent of holocaine may be instilled at frequent intervals. Five per cent sulfathiazole ointment has been used, as has 5 per cent solution of sodium sulfathiazole sesquihydrate. For persistent corneal infiltrates, x-ray has seemingly yielded some results.

Period of Infectivity—It is not yet known how long the danger of transmission to others exists. At present for practical purposes a sufferer from epidemic keratoconjunctivitis may be allowed to return to work when the active conjunctivitis has disappeared.

Preventive Measures—At present the only preventive measure known is complete isolation of infected persons. Inasmuch as the disease has been transmitted through medical personnel, the most meticulous asepsis must be insisted upon. Not only must physicians and nurses wash their hands thoroughly with soap and water after each patient, but also eye droppers, solutions, instruments, etc., must be sterilized to prevent infection of noncontaminated persons. The infected individual must be told of the danger of transmission of this disease to others, not only in the plant, but even in the home surroundings. It is suggested that in industrial plants where epidemic keratoconjunctivitis has made its appearance the following methods of procedure be adopted:

1. In smaller plants with a limited personnel, every individual with a red eye should be stopped at the entrance of the plant and sent direct to the plant physician to determine whether or not epidemic keratoconjunctivitis is present.

In larger plants where such a procedure is not possible, supervisors and foremen should be instructed in detail to make rounds immediately when a fresh shift starts, and send any individual with a red eye to the medical office.

2. If the cases are to be treated at the medical department of the plant, a separate room should be set aside for such cases and in that room there must be exercised the most scrupulous asepsis even to washing off the arms of the chairs in which the patients sit. Aside from the aseptic and separate care of the recognized cases of the disease, special cleanliness of the hands of the physician in the general clinic should be maintained, with the use of an effective disinfectant between cases, lest the infection be spread by means of undiagnosed cases, especially those suspected of having foreign bodies in the eye.

3. Every patient with epidemic keratoconjunctivitis should be excluded from the communal facilities of the plant until the inflammation has subsided to the point where the plant physician considers it no longer transmissible.

4. Explicit instructions should be given to every individual regarding the danger of transmission, and emphasizing the decrease in the war effort as a result of the time lost from epidemic keratoconjunctivitis.

5. The local health authorities should be notified immediately of the existence of individual cases.

ELEVENTH ANNUAL

MEDICAL POSTGRADUATE SHORT COURSE

WILL BE HELD AT

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The Journal of The Florida Medical Association

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NEWLY ELECTED OFFICERS

Dr. Eugene G. Peek of Ocala assumed the presidency of our Association at the close of the Seventieth Annual Convention, at noon, April 16. The names of the newly elected president-elect, three vice presidents, secretary-treasurer and editor of the Journal appear on the officers' page in this issue. Listed also are the new appointments on regular committees made by President Peek.

Inasmuch as this Journal was in press before the annual convention convened, the proceedings of the various sessions could not be included. A full writeup on the Seventieth Annual Convention, held in Jacksonville, April 15 and 16, will appear in the June Journal.

MEDICAL POSTGRADUATE COURSE

The eleventh annual graduate short course for doctors of medicine will be held this year in Jacksonville from June 21 through June 26. The faculty for the course will meet the preceding high standards which have made the graduate course so popular with Florida physicians. In the present emergency it is more than ever imperative that refresher courses for physicians be provided and that instruction on a graduate level in medicine and surgery be made available in the state. Dr. T. Z. Cason, director, will have a full announcement in the June Journal.

CIVIL SERVICE POSITIONS OPEN

The U. S. Civil Service Commission, Washington, D. C., announces that applications for the following positions will be accepted until the needs of the service have been met:

Junior Medical Officer (Rotating Internship), $2,000 a year.

Junior Medical Officer (Psychiatric Resident), $2,000 a year.

Senior Medical Technician, $2,000; Optional Subjects: (1) General (2) Roentgenology.

Medical Technician, $1,800; Optional Subjects: (1) General (2) Roentgenology (3) Surgery.

Assistant Medical Technician $1,620; Optional Subjects: (1) General (2) Roentgenology (3) Surgery.

Junior Laboratory Helper, $1,440; Optional Subjects: (1) General (2) Roentgenology.

Senior Medical Officer, $4,600 a year.

Medical Officer, $3,800 a year.

Associate Medical Officer, $3,200 a year.

Physicians interested are urged to apply immediately.

INVALID DIETS AND FOOD RATIONING

Of interest to all who are concerned with diets for invalids is Ration Order 13, issued by the Office of Price Administration under date of February 9, 1943. This order covers all canned, dried and frozen fruits and vegetables. Article II, Section 2.5 of the order reads as follows:

> Consumers who need more processed foods because of illness may apply for more points. (a) Any consumer whose health requires that he have more processed foods than he can get with War Ration Book Two, may apply for additional points. The application must be made on OPA Form E-315, by the consumer himself or by someone acting for him, and may be made in person or by mail. The application can be made only to the board for the place where the consumer lives. He must submit with his application a written statement of a licensed or registered physician or surgeon, showing why he must have more processed foods, the amounts and types he needs during the next two months, and why he cannot use unrationed foods instead.
>
> (b) If the board finds that his health depends upon his getting more processed foods, and that he cannot use or cannot get unrationed foods, it shall issue to him one or more certificates for the number of points necessary to get the additional processed foods he needs during the next two months.

The application form referred to above, OPA Form E-315, is apt to be somewhat confusing to patients. It is titled "Sugar Special Purpose Application," and was developed primarily to meet the need for home canning. It is being used temporarily until a more adequate form can be gotten out.

It is anticipated that the procedure indicated in Section 2.5 above may be changed somewhat in the future, in which case due notice will be provided.

THE NATIONAL PHYSICIANS COMMITTEE

In these days when it seems that doctors, as individuals and as a profession, are on the defensive against the field, it is some comfort to know that they have at least one friend at court, viz., the National Physicians Committee, who is representing their interests in many ways.

As an example of their activities is the poll taken last fall of all of the candidates for the National Congress, relative to their stand upon certain medical matters. It is a matter or record, from letters received in answer to the questionnaires, that 300 out of 435 congressmen who were elected, have pledged themselves (a) to a professional status for physicians, (b) as unalterably opposed to compulsory health insurance and (c) to avoid at any cost the sacrifice of the sacred doctor-patient relationship.

The National Physicians Committee is supported entirely by voluntary contributions from doctors generally who have been solicited for their contributions. It would seem a wise investment on the part of all of us to give substantial amounts to this committee to further the work which it is doing.

From Rocky Mountain Medical Journal 40:160-161 (*March*) 1943.

BIRTHS

Dr. and Mrs. I. J. Strumpf of Jacksonville announce the birth of a daughter, Dorothy Ewing, on February 19 in Atlanta.

Dr. and Mrs. Courtlandt Berry of Orlando announce the birth of a daughter, Beverly Coward, on March 18.

Dr. and Mrs. A. Mackenzie Manson of Jacksonville announce the birth of a daughter, Rosemary Adams, on April 7.

STATE NEWS ITEMS

Dr. Edgar D. Shanks, secretary of the Medical Association of Georgia, extends a hearty welcome to all members of our Association to attend the annual session to be held at the Biltmore Hotel, Atlanta, May 11-14, 1943.

Dr. Henry L. Tippins of Miami is now located at 330 Ingraham Building. He will limit his practice to pediatrics.

Dr. Ralph I. Lloyd, president of the American Academy of Ophthalmology, was the guest of honor at a meeting of service and civilian doctors at the U. S. Naval Hospital in Pensacola, March 19; his subject was "Proptosis." Dr. M. A. Lischkoff entertained at dinner for Dr. Lloyd and the other distinguished guests.

Dr. Frank S. Adamo of Tampa, a lieutenant colonel in the Army, who received nationwide acclaim for his miraculous lifesaving work as an army doctor on Bataan, has been awarded the legion of merit by the war department. In absence of any report, Col. Adamo has been reported missing since the fall of Corregidor one year ago in March. His citation as announced at Washington, March 17, stated in part: "As chief of the surgical service of General Hospital No 2 on Bataan Peninsula, despite the almost total lack of standard facilities, he directed the surgical service efficiently, and personally performed a large share of the surgical work with marked success."

Taken from Tampa Morning Tribune.

Dr. Orville L. Barks, whose home address is Sanford, has been reported missing in action, according to information from the War Department, received by his wife. Dr. Barks has been a first lieutenant in the U. S. Army since September, 1942. He was reported missing in action in the North African area since February 17. Dr. Barks went to Africa in January after being stationed at Camp Butner, N. C., and Camp Pickett, Va. He had previously served in the Army for one year before going to Sanford in 1941, where he practiced medicine for thirteen months. This information is taken from the Florida Times-Union of March 16, 1943.

Members of the Association who attended the New Orleans Graduate Medical Assembly, March 15 to 18, were: C. C. Box, Crestview; Rabun H. Williams, Eustis; John E. Maines, Jr., H. M. Merchant, R. E. Summitt, Gainesville; E. C. Crouch, Jasper; Robert B. Harkness, Lake City; William H. Ellis, John D. Milton, Miami; Don S. Fraser, Panama City; W. P. Hixon, Lee Sharp, Carol C. Webb, Pensacola; E. W. Ekermeyer, Tallahassee; Samuel H. Adams, R. Bradner Mertz, Hugh E. Parsons, Tampa; William E. Bippus, West Palm Beach; Ruth S. Hart, Winter Park.

Dr. Frank L. Quillman recently joined the Dade County Health Unit as director of the Maternal and Child Health Section. He was formerly director of the Franklin-Gulf-Wakulla Health Unit.

EMIL LUSTIG

Dr. Emil Lustig of St. Petersburg, an honorary member of the Florida Medical Association, died at his home on February 23, at the age of 86.

Dr. Lustig was a graduate of the Philadelphia College of Pharmacy and Science, class of 1877, and in 1883 was graduated from the New York University Medical College of New York City. He practiced in New York City, Ashtabula, Ohio, Springfield, N. Y., and Buffalo, N. Y., before coming to St. Petersburg in the early twenties. He was medical examiner for the selective service board in Buffalo during World War I.

Dr. Lustig was a member of the Pinellas County Medical Society, the Florida Medical Association, and the American Medical Association.

Included among his survivors are his wife, Katherine Schurr Lustig; a son, Emil, Jr., of Buffalo, N. Y., and two daughters, Miss Adeline Lustig of Buffalo and Mrs. Earl Simon of Philadelphia.

COMPONENT COUNTY SOCIETIES

BAY

Serving as officers of the Bay County Medical Society for 1943 are Dr. John Powell Adams, president; Dr. Don S. Fraser, vice president, and Dr. J. O. Barfield, secretary.

BREVARD

The members of the Brevard County Medical Society held their March meeting in Titusville on the evening of the 17th. They visited the emergency hospital which has been set up in that city for use during the war.

BROWARD

Dr. Claire L. Straith, chief of Plastic and Oral Surgery at Harper's Hospital, Detroit, was guest speaker at a meeting of the Broward County Medical Society, held Wednesday evening, February 17. His subject was "Plastic Surgery Principles Applied to War Surgery."

COLUMBIA

The Columbia County Medical Society has reported 100% of its dues for 1943. Officers of this society are Dr. Harry S. Howell, president; Dr. W. S. Nichols, vice president, and Dr. T. H. Bates, secretary-treasurer.

DADE

The Dade County Medical Society held its regular meeting on the evening of March 2. Dr. J. Raymond Graves presented a paper on "Continuous Sacral Anesthesia in Obstetrics," which was discussed by Drs. W. F. Hartman, C. G. Mentzer and Colquitt Pearson. Dr. DeLee showed a motion picture on "Postpartum Hemorrhage."

FRANKLIN-GULF

The Franklin-Gulf County Medical Society is 100% paid for 1943. Dr. J. R. Norton of Port St. Joe is serving as secretary-treasurer of this society.

JACKSON

The Jackson County Medical Society is on the honor roll of 100% paid societies. Officers of this society for 1943 are Dr. R. N. Joyner of Marianna, president; Dr. R. L. Miller of Graceville, vice president, and Dr. Clayton A. Adams, Jr. of Marianna, secretary-treasurer.

MADISON-SUWANNEE

The Madison-Suwannee County Medical Society has reported 100% of its dues for 1943. Officers of this society are Dr. Eustace Long, president, and Dr. E. D. Thorpe, secretary-treasurer.

MONROE

The Monroe County Medical Society is 100% paid for 1943. Dr. Harry C. Galey is president of the organization and Dr. William R. Warren is secretary-treasurer.

NASSAU

The Nassau County Medical Society met early in March at the Nassau County Hospital. Dr. George A. Dame, president of the Society, was named delegate to the annual convention of the Association, with Dr. Henry B. Dickens, Jr., alternate. Dr. L. L. Bunker and Dr. D. G. Humphreys were named on the Society's legislative committee. A discussion was held by those present regarding pending legislation on medical licenses in this state and the Society went on record as opposing any legislation advocating less stringent rules governing the issuing of licenses.

PALM BEACH

Officers of the Palm Beach County Medical Society for 1943 are Dr. Kenneth Montgomery, president; Dr. Nat M. Weems, vice president; Dr. J. L. Carlisle, secretary, and Dr. W. C. Williams, Jr., treasurer. Dr. W. E. Van Landingham, city health officer of West Palm Beach, has announced that a complete reorganization of the venereal disease control program is being worked out in this county through the Palm Beach County Medical Society.

PASCO-HERNANDO-CITRUS

Dr. and Mrs. G. R. Creekmore of Brooksville entertained the members of the Pasco-Hernando-Citrus County Medical Society at their home on Thursday evening, March 11. Dinner was served by Mrs. Creekmore, after which a scientific meeting was held. Several clinical cases were reported and discussed. The following members were appointed to the committee on Legislation and Public Policy: Dr. W. Wardlaw Jones, Dr. W. B. Moon, and Dr. G. R. Creekmore. Dr. Jones invited the Society to meet with him in Dade City on April 8.

PINELLAS

Members of the Pinellas and Hillsborough County Medical Societies, military medical and public health personnel were invited to attend the March dinner meeting of the Pinellas County Medical Society, held on the evening of March 5 at the Shrine Club, St. Petersburg. The program, consisting of a discussion of "Atypical Pneumonia," was in charge of the medical officers of the U. S. Naval Air Station of Miami. Dr. W. W. Davies, maritime commission, U. S. Navy, served as moderator; Dr. Warren W. Quillian was essayist, Dr. J. T. Cowart, pathologist, Dr. F. J. Payton, roentgenologist, Dr. F. R. Meyers, clinician. Dr. C. C. Rudolph summarized the discussions.

The monthly round table assembly was held on March 19 at the Army & Navy Club. Dr. G. E. Miller acted as moderator.

PUTNAM

The Putnam County Medical Society is 100% paid for 1943. Heading this society are the following officers: president, Dr. J. Worth Brantley, Grandin; secretary-treasurer, Dr. Claude M. Knight, Palatka.

ST. JOHNS

The St. Johns County Medical Society has reported 100% of its dues for 1943. Officers of this society are Dr. A. W. Norris, president; Dr. H. E. White, vice president; Dr. Charles C. Grace, secretary, and Dr. R. D. Harris, treasurer.

SARASOTA

Dr. Orville H. Cribbins of Sarasota has been elected president of the medical society of that county. Dr. Arthur O. Morton, also of Sarasota, is the secretary-treasurer.

SEMINOLE

The March meeting of this society was held on the 9th in Sanford. The feature of the meeting was a talk by Dr. E. F. Hoffman, Acting Director of the Bureau of Epidemiology of the State Board of Health, on "Epidemiology and Vital Statistics." Many members present took part in the discussion. At the business meeting which followed, it was decided to purchase a $25.00 war bond and send it to the treasurer of the State Association, in place of assessing members at home for dues of doctors in military service who belong to the local society. Before partaking of a sumptuous turkey dinner, the members and guests were treated to refreshments by Dr. Leonard of the Air Station. There were nine members and guests present and the meeting was thoroughly enjoyed by all.

BOOKS RECEIVED

Acknowledgment of books received will be made in this column and this will be deemed by us a full compensation to those sending them. A selection will be made for review as expedient.

CENTRAL AUTONOMIC REGULATIONS IN HEALTH AND DISEASE. By Heymen R. Miller, M.D., Associate Attending Physician, Montefiore Hospital, New York. Some of the stimulating problems treated in this work: Central influence on sugar metabolism, obesity and urea regulation; clinical application. Mechanism of sleep and cinical import. Renal and central factors in edema, diabetes insipidus and other forms of polyuria. Central controls of reproduction and of other endocrine functions. The simulations of cardio-respiratory and abdominal disease; the difficulties in diagnosing these conditions analyzed on the basis of autonomic functions. Brain tumors masquerading as acute appendicitis. Cardiac pain and the theory of anoxemia in relation to the autonomic nervous system. The pharmacodynamics of the autonomic nervous system. The anatomy of the hypothalamus and its fiber connections. The "centers" in the cortex, hypothalamus, midbrain, medulla and pons and their influence on various systems of the body in health and disease. Cloth. Price, $5.50, Pp. 440, with 64 illustrations. New York: Grune and Stratton, Inc., 1942.

THE MIND AND ITS DISORDERS. By James N. Brawner, M.D., Medical Superintendent, Brawner's Sanitarium, Smyrna, Ga. Part I is devoted to a brief description of mental reactions as related to cerebral functions. Part II is devoted to the etiology, symptomatology and treatment of the psychoses. The grouping of these disorders is simple and corresponds to some extent with that recommended by the American Psychiatric Association. In Part III will be found a brief description of the neuroses and psychoneuroses. In Part IV is given a brief description of related subjects. Fabrikoid. Price, $3.50. Pp. 228, with illustrations. Atlanta, Ga.: Walter W. Brown Publishing Company, 1942.

MENTAL ILLNESS: A GUIDE FOR THE FAMILY. By Edith M. Stern with the collaboration of Samuel W. Hamilton, M. D. Cloth. Price, $1.00. Pp. 134. New York: The Commonwealth Fund, 1943.

ABSTRACT DEPARTMENT

Members of the Florida Medical Association who have had articles published in out-of-state medical journals are requested to forward such journals or reprints to Box 1018, Jacksonville, for abstracting in this department.

PERFORATION OF AN ASPIRATED CEDAR LEAF THROUGH THE CHEST WALL, BOWEN, FRED H., JACKSONVILLE, SOUTH. M. J. 35: 24-25 (JAN.) 1942.

In the case reported, an aspirated foreign body eroded through the wall of the chest, after which the patient recovered.

Soon after a 13 year old boy aspirated a cedar leaf, cough and weakness developed. Three weeks later he had atypical pneumonia from which he seemed to recover in a week, only to have the symptoms of cough, fever and loss of weight recur. Five months after the patient was first admitted to the hospital, and after he had been readmitted on several occasions, the foreign body was recovered by drainage of an abscess which had developed in the wall of the chest.

NIGHT BLINDNESS INDUCED, GAMMAGE, F. V., BLUEFIELD, W. VA., EYE, EAR, NOSE AND THROAT MONTHLY 21: 306-309 (Nov.) 1942.

The use of artificial light severely burdens certain portions of the retina, and results in asthenopia or eyestrain with congestion, metabolic disturbances, myasthenia, amblyopia, and occasionally amaurosis. This physiologic upset produces subjective and objective symptoms such as poor hazy vision, spots before the eyes, itching, burning, eyeache, nervousness and hallucinations.

Two cases are reported by the author. The first is that of a white male hospital attendant who was put on night duty. In a few days eyestrain developed with pseudoptosis of the right upper lid. He was advised to discontinue work. One year later he returned with the same symptoms, but also complained of malaise, nausea, vomiting and gastric disturbances, in spite of the fact that he was engaged in a different occupation.

The second case is that of a colored attendant at the hospital who had been on night duty for eleven years. A diagnosis of acute inflammatory or congestive glaucoma was made. Treatments with eserine and pilocarpin were not successful but sulfanilamide cured the condition in a short time.

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ADVERTISERS' NOTES

PARKE-DAVIS WINS ARMY-NAVY 'E' FOR WAR PRODUCTION

Detroit, already world-famous as democracy's arsenal of war weapons, achieved prominence in a new field Friday, February 26, when 2,700 employees of Parke, Davis & Company received the Army-Navy "E" pennant for excellence in production of materials for saving lives.

Brigadier General John M. Willis, commanding general at Camp Grant, Ill., presented the symbolic "E" pennant, which was received by Dr. A. W. Lescohier, president of the company.

Lieutenant E. B. Williams, senior medical officer of the Detroit Naval Armory, presented the insignia. John Tighe, representing the employees, accepted the insignia, an "E" pin which every employee is entitled to wear. Among the honored guests seated on the platform were Joseph Roberts, oldest male employee who began his service with the company in 1892, and Miss Lillian Paye, oldest female employee whose service with Parke, Davis & Company began in 1896.

"E" flags are flying in each of the company's branches and depots in the United States and "E" pins have been sent to all employees in this country.

Typhus fever vaccine and scores of pharmaceutical and biological products prepared in Detroit by Parke-Davis men and women accompany the United States fighting forces to the front-line combat zones all over the world. Dried blood plasma, prepared from blood of thousands of civilian donors, goes to all parts of the globe from the laboratories at Parke-Davis. These laboratories, among the greatest in this or any other country in facilities for processing blood plasma, went into full speed production of war material last year.

NEW SQUIBB CAPSULES SUPPLY MASSIVE DOSES OF VITAMIN D

To provide massive doses of vitamin D for use in the treatment of hypoparathyroid tetany and certain types of rickets, E. R. Squibb & Sons, New York, are now supplying capsules of Viosterol, each containing 50,000 U. S. P. units of vitamin D_2. The capsules are packaged in bottles of 40 and 100.

Clinically, vitamin D may be used to produce either of two effects, depending upon the dosage. In relatively low dosage, it exerts antirachitic activity, while in high dosage, ranging upward from 60,000 units daily, it raises a subnormal serum calcium level and is therefore useful in hypoparathyroid tetany. It is also sometimes administered as a single massive dose in the treatment of active rickets.

In hypoparathyroid tetany, an initial dose of eight or more Squibb Vitamin D Capsules daily is suggested, and a maintenance dose of two to four daily. In obstinate rickets, one capsule daily is recommended; in refractory rickets, one or more capsules daily; and in thoracic rickets, one capsule daily for two or three weeks.

In addition to the new Vitamin D Capsules, Squibb, of course, will continue to supply Viosterol in Oil, one gram of which contains the equivalent of 10,000 U. S. P. XII units of vitamin D.

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MEDICINE—Two Weeks Intensive Course starting June 7. One Month Course in Electrocardiography and Heart Disease starting the first of every month, except August.

FRACTURES & TRAUMATIC SURGERY—Two Weeks Intensive Course starting June 14.

GYNECOLOGY—Two Weeks Intensive Course starting June 28th; Clinical and Diagnostic Courses.

OBSTETRICS—Two Weeks Intensive Course starting April 19.

OPTHALMOLOGY—Two Weeks Intensive Course starting September 13. Course in Refraction Methods starting May 3.

OTOLARYNGOLOGY—Two Weeks Intensive Course starting September 27.

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1. Lennox, W. G.: Jl. A.M.A., Oct. 10, 1942

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In reviewing 110 years of continuous expansion and progress, AO officials trace the origin of the concern back to 1833 when William Beecher, a jeweler by trade and an inventor by avocation, decided to enlarge his business in Southbridge by manufacturing spectacles.

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Prolonged chronic illness followed by sharp limitation of diet during a period of preoperative preparation, especially when surgery of the gastrointestinal tract is contemplated, may result in a state of partial vitamin depletion. Most parenteral fluids routinely contain glucose, which sets up an additional drain on the vitamin B stores in the body. Postoperatively, nausea and vomiting occur frequently and there is often the necessity for complete restriction of food for days at a time.

This sequence of events was clearly reproduced in a case recently reported (Ann. Int. Med., 18: 110, 1943). The patient developed a sore tongue and became uncooperative, disoriented, and confused. A dramatic change ensued after administration of riboflavin and nicotinic acid, with complete disappearance of the lesions within five days.

A number of laboratory procedures have been developed in recent years to augment the cinical diagnostic approach to vitamin deficiency disease, but many of them require special equipment and are not easily adaptable for routine clinical use. Physicians may obtain a list of vitamin values of foods and a bibliography of important and generally informative papers on vitamins by writing Eli Lilly and Company, Indianapolis.

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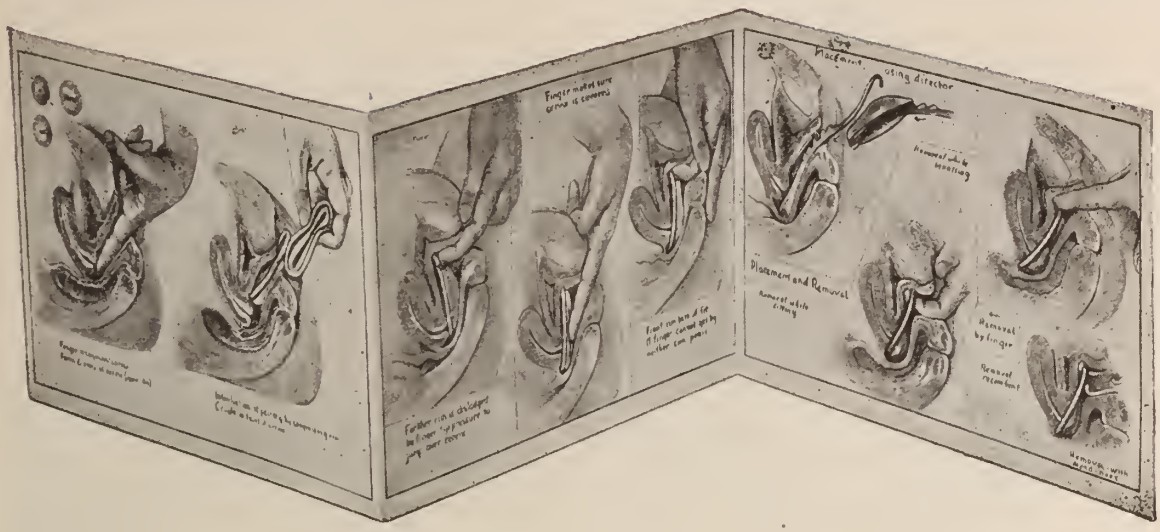
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DUVAL COUNTY AUXILIARY

The March meeting of the Woman's Auxiliary to the Duval County Medical Society was held in the home of Mrs. F. W. Krueger, with the president, Mrs. J. W. Hayes, presiding.

Reports from the various standing committees indicated an active program of activities sponsored by the Auxiliary this year. Plans were made to continue the defense work under the direction of Mrs. Charles Henley, chairman. The Auxiliary voted $25.00 for the extension of this department.

Mrs. F. W. Krueger, state president, outlined the program for the state meeting to be held in Jacksonville, April 15 and 16. She explained that due to war conditions the convention this year had been streamlined to correspond with that of the national organization, and only delegates from the various county auxiliaries would be expected to attend. She urged members to continue their war work and to try to keep the Auxiliary functioning, as it has become the patriotic duty of every organization to uphold the policies of our government at this time.

Delegates elected to attend the state meeting were: Mrs. J. W. Hayes, president, Mrs. A. K. Wilson, and Mrs. S. M. Copeland.

Appointed to serve on the nominating committee were: Mrs. J. H. Owens, Mrs. Frederick J. Waas, and Mrs. A. K. Wilson.

Mrs. E. W. Veal, program chairman, presented Mrs. Charles Henley, who gave a most interesting reading, entitled "My Victory Garden," and Mrs. S. R. Norris presented the book, "Eneas Africanus" to the delight of everyone.

During the social hour, members were invited into the dining room where delicious refreshments were served from a beautifully appointed table centered with a lovely arrangement of spring flowers. Mrs. L. Y. Dyrenforth and Mrs. E. W. Veal poured.



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STATE AND SECTIONAL MEETINGS

SOCIETY	PRESIDENT	SECRETARY	ANNUAL MEETING
orida Medical Association	Eugene G. Peek, Ocala	Shaler Richardson, Jacksonville	To Be Announced
orida Medical Districts:			
A—Northwest	Courtland D. Whitaker, Marianna	Stewart Thompson, Jacksonville	Tallahassee, Postponed
B—Northeast	L. Y. Dyrenforth, Jacksonville	" " "	Ocala, Postponed
C—Southwest	Edgar Watson, Lakeland	" " "	Sarasota, Postponed
D—Southeast	William Y. Sayad, W. Palm Beach	" " "	Miami, Postponed
ahama Medical Association	H. B. Searcy, Tuscaloosa	D. L. Cannon, Montgomery	
orgia, Medical Assn. of	James A. Redfearn, Alhany	E. D. Shanks, Atlanta	Atlanta, May 11-14, 1943
orida—			
Section, Am. College Phys.	R. H. Knowlton, St. Petershurg	Kenneth Phillips, Miami	To Be Announced
Dental Society, State	A. Malcolm Smith, D.D.S., Tampa	H. L. Cartee, D.D.S., Miami	To Be Announced
Derm. and Syph., Soc. of	Wiley M. Sams, Miami	Lauren M. Sompayrac, Jacksonville	To Be Announced
East Coast Medical Association	T. C. Kenaston, Cocoa	I. M. Hay, Melbourne	Postponed
Hospital Association	Mr. Ernest G. McKay, Tampa	Mr. R. L. Martin, St. Petersburg	Tampa—Postponed
Industrial Surgeons, Assn. of	Frank D. Gray, Orlando	Richard H. Walker, Orlando	To Be Announced
Medical Postgraduate Course	Turner Z. Cason, Jacksonville	Chairman	
Nurses Association, State	Mrs. Ann Thompkins, Leesburg	Miss Madalee Hazel, St. Petersburg	
Ophthal. & Otol., Soc. of	Shaler Richardson, Jacksonville	C. E. Dunaway, Miami	To Be Announced
Pathological Society	L. Y. Dyrenforth, Jacksonville	Iva C. Youmans, Miami	To Be Announced
Pediatric Society	Ludo von Meysenhug, Daytona B.	Robert Blessing, Ft. Lauderdale	To Be Announced
Pharmaceutical Association, State	Mr. H. B. Douglas, Bonifay	Mr. R. Q. Richards, Ft. Myers	Miami, To Be Announced
Public Health Association	W. H. Pickett, Jacksonville	Lloyd N. Harlow, Jacksonville	Postponed
Radiological Society	John N. Moore, Ocala	Walter A. Weed, Orlando	To Be Announced
Railway Surgeons' Association	Frank D. Gray, Orlando	W. C. Page, Cocoa	To Be Announced
Tuberculosis & Health Assn.	Mrs. M. M. Ehert, Lake Wales	Mrs. May Pynchon, Jacksonville	Jacksonville, May, 1943
attahoochee Valley Med. Assn.	Herbert E. White, St. Augustine	Robert B. McIver, Jacksonville	Postponed
lf Coast Clinical Society	G. G. Oswalt, Mohile, Ala.	C. L. Rutherford, Mohile, Ala.	Postponed
. Sec., Am. Cong. Phys. Ther.	John J. McGuire, Pensacola	Kenneth Phillips, Miami	
utheastern Surgical Congress	Alton Ochsner, New Orleans	B. T. Beasley, Atlanta	Postponed
uthern Medical Association	Harvey F. Garrison, Jackson, Miss.	Mr. C. P. Loranz, Birmingham	To Be Announced
wannee River Medical Society	L. J. Arnold, Jr., Lake City	H. S. Howell, Lake City	

COMPONENT SOCIETIES BY DISTRICTS

	SOCIETY	PRESIDENT	SECRETARY	MEETING DATE	MEMBERS Total	MEMBERS Paid	COUNCILOR
A	Bay	J. Powell Adams, M.D. Panama City	J. O. Barfield, M.D. County Health Unit Panama City		13	11	A-1-45 C. D. Whitaker, M.D. Marianna
	Escambia *Santa Rosa	Alvyn W. White, M.D. 24 W. Chase St. Pensacola	Lee Sharp, M.D. 24 W. Chase St. Pensacola	2nd Tuesday 8:00 P.M.	50	49	
	Franklin-Gulf		J. R. Norton, M.D. Port St. Joe	3rd Tuesday Odd Months	5	100%	
	Jackson *Calhoun	R. N. Joyner, M.D. Marianna	C. A. Adams, Jr., M.D. Marianna	2nd Tuesday 7:30 P.M.	13	100%	
	Walton-Okaloosa	A. G. Williams, M.D. Lakewood	R. B. Spires, M.D. DeFuniak Springs	3rd Thursday 8:00 P.M.	6	100%	
	Washington-Holmes	N. J. Dawkins, M.D. Vernon	B. W. Dalton, M.D. Vernon		6	100%	
	Columbia *Baker, Hamilton	Harry S. Howell, M.D. Blanche Hotel Annex Lake City	Thomas H. Bates, M.D. Blanche Hotel Annex Lake City	1st Monday 7:30 P.M.	12	100%	A-2-44 William D. Rogers, M.D. Chattahoochee
	Leon-Gadsden-Liberty-Wakulla-Jefferson	James W. Sapp, M.D. Havana	B. A. Wilkinson, M.D. Telephone Bldg. Tallahassee	Quarterly 8:00 P.M.	40	37	
	Madison-Suwannee	Eustace Long, M.D. Madison	E. D. Thorpe, M.D. Madison		6	100%	
	Taylor *Dixie, Lafayette	W. J. Baker, M.D. Foley	G. H. Warren, M.D. Perry	Last Friday 8:00 P.M.	5	4	
B	Alachua *Bradford, Gilchrist, Union	Geo. C. Tillman, M.D. 505 W. University Gainesville	Chester F. Ahmann, M.D. 1043 W. Masonic Gainesville	2nd Wednesday 7:30 P.M.	28	22	B-3-45 L. Y. Dyrenforth, M.D. Jacksonville
	Duval *Clay	T. Z. Cason, M.D. 2033 Riverside Ave. Jacksonville	F. A. Copp, M.D. 411 St. James Bldg. Jacksonville	1st Tuesday 8:15 P.M.	193	189	
	Marion *Levy	T. Hartley Davis, M.D. 202 Commercial Bk. Bldg. Ocala	B. F. Drake, M.D. Professional Bldg. Ocala	3rd Thursday 12:30 P.M.	29	24	
	Nassau	Geo. A. Dame, M.D. Fernandina	E. F. Waite, M.D. Fernandina	2nd Wednesday 8:00 P.M.	7	100%	
	Putnam	J. Worth Brantley, M.D. Grandin	C. M. Knight, M.D. Palatka	2nd Tuesday Even Months 7:00 P.M.	10	100%	
	St. Johns	Alfred W. Norris, M.D. Flagler Hospital St. Augustine	Charles C. Grace, M.D. East Coast Hospital St. Augustine	3rd Tuesday 8:30 P.M.	12	100%	
	Brevard	G. E. Christie, M.D. Box 151 Titusville	I. K. Hicks, M.D. Melbourne	3rd Wednesday	11	100%	B-4-44 D. T. McEwan, M.D. Orlando
	Lake *Sumter	Louis R. Bowen, M.D. Eustis	R. H. Williams, M.D. Eustis	1st Thursday 12:30 P.M.	17	16	
	Orange *Osceola	T. E. McBride, M.D. Apopka	John A. Pines, M.D. 106 E. Central Ave. Orlando	3rd Tuesday 5:30 P.M.	93	79	
	Seminole	Geo. H. Putnam, M.D. Touchton Bldg. Sanford	Leland H. Dame, M.D. Co. Health Unit Sanford	2nd Tuesday 5:30 P.M.	11	10	
	Volusia *Flagler	L. von Meysenbug, M.D. Box 3356 Daytona Beach	R. L. Miller, M.D. 258½ S. Beach St. Daytona Beach	2nd Tuesday 7:30 P.M.	44	35	
C	Hillsborough	T. C. Maguire, M.D. 104 S. Collins St. Plant City	James S. Grahle, M.D. 811 Citizens Bldg. Tampa	1st Tuesday 8:00 P.M.	104	91	C-5-44 Leland F. Carlton, M.D Tampa
	Manatee	M. M. Harrison, M.D. Professional Bldg. Bradenton	L. W. Blake, M.D. Bradenton	3rd Tuesday 7:00 P.M.	14	100%	
	Pasco-Hernando-Citrus	W. W. Jones M.D. Dade City	G. R. Creekmore, M.D. Brooksville	2nd Thursday 7:00 P.M.	11	10	
	Pinellas	W. C. McConnell, M.D. 313 First Federal Bldg. St. Petersburg	Annette M. Feaster, M.D 166 Fourth Ave. N. E. St. Petersburg	1st and 3rd Fridays 6:30 P.M.	103	97	
	Sarasota	O. H. Crihbins, M.D. 138 N. Link Sarasota	A. O. Morton, M.D. Commercial Court Sarasota	2nd Tuesday 8:30 P.M.	20	100%	
	DeSoto-Hardee-Highlands-Charlotte-Glades	M. C. Kayton, M.D. Wauchula	C. H. Kirkpatrick, M.D. Box 454 Arcadia	Quarterly	20	100%	C-6-45 Edgar Watson, M.D. Lakeland
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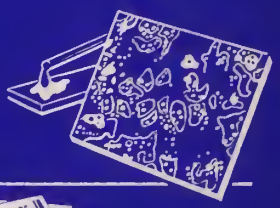
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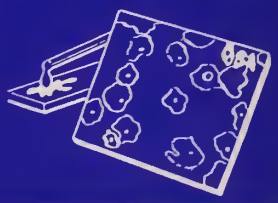
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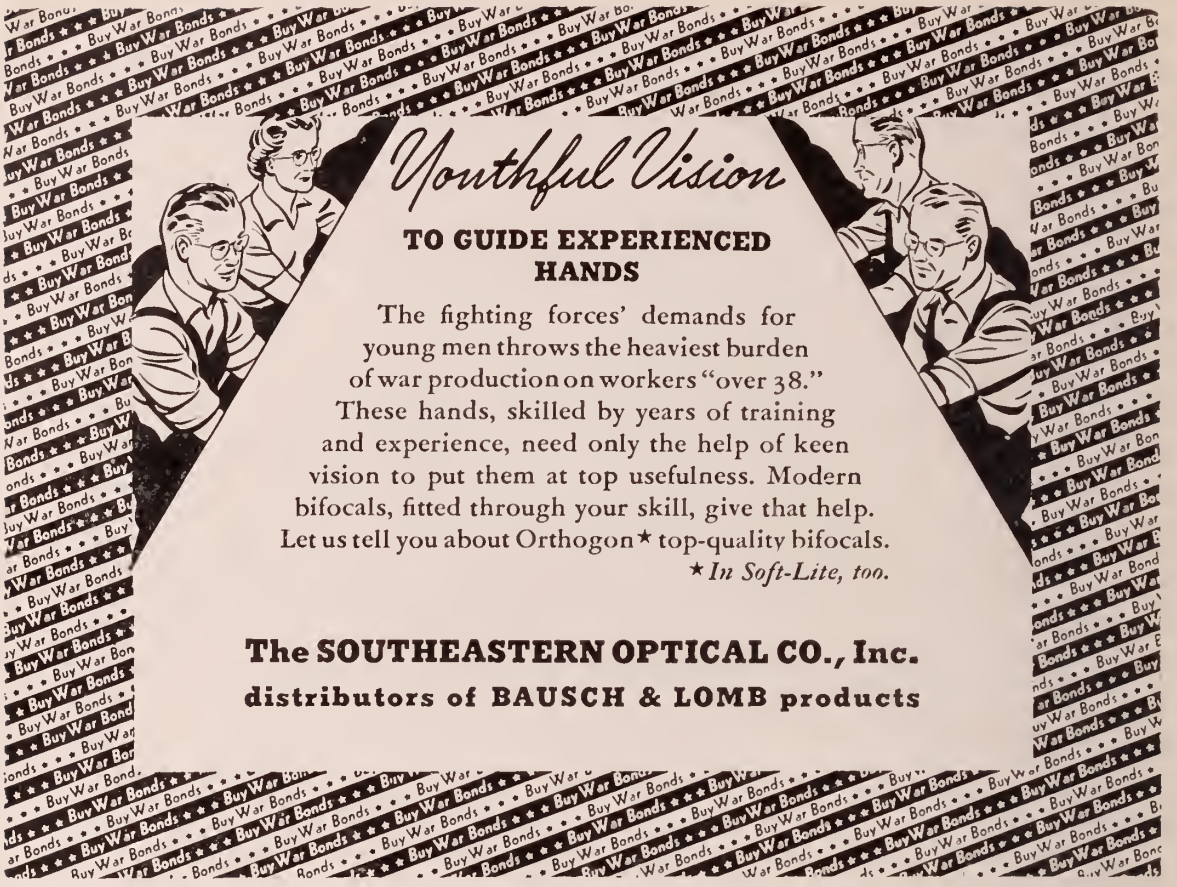
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*Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154
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PUBLISHED MONTHLY

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PRESIDENT'S ADDRESS

GILBERT S. OSINCUP, M. D.
ORLANDO

I wish first to pay tribute to those members of the Florida Medical Association who have given up their homes, their practice and in some cases their lives, in order that they might serve their country to the fullest. These physicians have, for the most part, made an enormous sacrifice financially and professionally. They are the ones who have made it possible for Florida to play more than its full part in maintaining the admirable record of the medical profession, which has more than met all demands made on it by the necessities of war. As of today four hundred and eleven of our members have joined the armed forces, and there are many more who would do so if they were not restrained by reason of essentiality to their communities.

It is our first duty to preserve their practices for these members now in military service so that when the war is over, they may return to their homes and resume the practice of their chosen profession without undergoing a still greater sacrifice. It is our responsibility to them, to our profession, to the state and to the nation that we should preserve the high standards which they and we have set up. It is equally our responsibility to see that the citizens of the state of Florida shall receive adequate medical care during this difficult period. It is our problem to maintain these standards and at the same time provide these services, a task that is indeed difficult. I believe that we in the state of Florida have a solution for this problem, one which in my opinion is functioning satisfactorily and will continue to do so. I shall discuss this more fully later in this address.

The Association during the past year has gone through a critical period during which many new policies have had to be determined and procedures for the conduct of those policies put into effect. We, along with all other citizens of these United States, are faced with contingencies, some of which formerly existed, but have become more acute; many others are entirely new as a result of the position in which we find ourselves as a nation, and must be met. It is impossible in the short time at my disposal to go into detail as to many of them. Some, however, more acute than others, I will attempt to discuss.

One of the more important is the question of finance. It was obvious, with such a large number of our members going into the Army and Navy, that our income would be appreciably diminished. It is true that during recent years the Association had built up a very creditable reserve. During the past year, it became necessary to withdraw some of this reserve, and it was apparent that with the continued diminution of our income this reserve would within a comparatively short time be nonexistent. In view of this situation the Board of Past Presidents, with Dr. H. Mason Smith as its chairman, undertook to raise money from the membership, the funds to be invested in War Bonds. By this means those taken from the reserve are being replaced, and, too, this plan is patriotic in that we are aiding financially the United States government. It is essential that the Association should have a financial backlog upon which we may call during the time of readjustment that must inevitably follow the termination of the war, for it is my firm belief that the stresses and strains to which we are now being subjected and to which we will continue to be subjected as long as the war lasts, are as nothing compared to those which we will face when victory is finally won and we, the citizens of the United States and of Florida, are going through that difficult period of readjustment. This committee has done its work well, with the result that up to date $3,644.13 has been put into the reserve.

Another outstanding achievement during the past year has been that of the Committee on Medical Postgraduate Course under the able leadership of Dr. T. Z. Cason. As you know, the Association has been conducting an annual graduate short course for the last ten years. The committee has built up this course to a point where it is indeed a very great credit to us, and

Delivered before the Seventieth Annual Meeting of the Florida Medical Association, Jacksonville, April 15, 1943.

it has done so at virtually no cost to the Association.

The University of Florida and the State Board of Health have cooperated fully in this enterprise. Their cooperation has meant much. The committee has constantly and with success endeavored both to improve the quality of the instruction given and to increase the number of members who have taken this instruction. In February of this year the Board of Control agreed at the instance of the committee to set up a Department of Medicine of the Graduate School of the University of Florida. The faculty of this graduate school will be chosen from members of the Association who are diplomates of their specialty boards, each of whom will designate instructors and assign their time.

In addition to conducting the graduate courses, this department will also direct research in medicine and surgery, particularly research applicable to Florida. The committee has in mind the eventual construction of a building in Jacksonville with an auditorium, classrooms, a library and possibly office space for the Association. It is my opinion that this far reaching plan is one of the greatest achievements of the Association.

The Committee on Procurement and Assignment, under the chairmanship of Dr. Edward Jelks, has been called upon during the past year to perform a prodigious amount of work, the far reaching effect of which cannot as yet be accurately evaluated. I am certain of one thing, that without the unselfish and tireless efforts of this committee we would find ourselves today in a most serious predicament. As it is, we in Florida are well in the forefront of states, and the work our committee has done is recognized nationally as outstanding.

It is unfortunate that it was necessary to discontinue the district meetings. These meetings had been improving from year to year both in quality and attendance, and certainly they served a very useful purpose. It is to be hoped that they will be resumed at the earliest possible moment. It is unfortunate, too, that the annual meeting has had to be curtailed, but this step also was unavoidable.

Because of two factors, first, a great increase in population in numerous areas of Florida and, second, the loss of so many physicians from certain communities over the state, it became apparent very early last year that some system must be worked out whereby physicians could be obtained for those areas lacking them, those in which the number had been greatly reduced and those in which the ratio of physicians had not increased commensurately with the increase in population. When the first questionnaire of the Procurement and Assignment Service was sent to the medical profession, there were many who expressed themselves as willing to be transferred from their home communities to another where a need might exist, but, as ever greater numbers were withdrawn from practice by reason of joining the armed forces, these same physicians became increasingly busy in their localities and consequently were reluctant to move to another.

In addition, close scrutiny revealed that the number of physicians reported as practicing in the state of Florida included many who were wholly or partially disabled, as well as large numbers who had long since retired because of age or total disability. The number actually engaged in practice is appreciably lower than the statistics, first given, showed. A recent survey by the Committee on Procurement and Assignment shows that the ratio of physicians to population is 1 to 2,193 instead of 1 to 808. We are told that the desirable ratio is 1 to 1,500, that a ratio of 1 to 2,000 constitutes an acute shortage and that a ratio of 1 to 3,000 indicates a dangerous shortage. In Florida we are, therefore, faced with a condition already acute, taking the state as a whole, and in some places one that is well beyond the danger line.

All of you know well that in these times any situation which threatens the morale of the people at home and hence the war effort, will receive attention from governmental authority. It is imperative that we, the members of organized medicine, do something to alleviate this situation, for if we do not, I am certain that it will be done for us and probably done by means and methods of which we do not approve. It is obvious then that if we, the members of the medical profession, do not take immediate and effective steps to correct this dangerous situation, it will be corrected for us. I have stated before, and still believe, that the only way we can expect to retain control of medical practice is to do the things which admittedly need doing, thus controlling the methods adopted. If we do not at least attempt to do these things voluntarily, how can we expect to have a voice in the operation of whatever scheme is evolved? Believing in the thesis stated, we have put into operation two plans which I be-

lieve should be entirely satisfactory to the profession of the state. They have been worked out with the complete agreement of the Committee on Procurement and Assignment, the Board of Governors of the Association, the State Board of Medical Examiners and the State Defense Council.

The first of these two plans is as follows: In one area of Florida some 7,000 citizens were without the services of a physician. We tried diligently to find one licensed in Florida to go to this area to practice, but met with no success. The State Defense Council passed a resolution specifying that when such a condition exists, the council should, after obtaining the approval of the Board of Governors of the Association, and of the Executive Committee of the State Dental Society in those cases in which a dentist is needed, ask the State Board of Health to request the United States Public Health Service to assign a medical or dental officer to that area to care for the people. It was also required that the State Board of Health appoint a bonded fiscal agent, who should collect from those treated a fee equal to that ordinarily charged in the area by private physicians. It was further directed that the money so collected be used to defray the operating expenses of the offices and that any balance be placed in a special account to be used only for health purposes in the state at the direction of the State Defense Council. This system does not provide free medical care except for indigent persons and thus does not pauperize the people. It further allows a private physician to go into the area, if he so desires, and set up practice without having to meet unfair financial competition. We are now endeavoring to find someone willing to go to the area where this plan has been put into effect, being assured that as soon as we are able to do so, the officers now working there will be withdrawn.

The second and in my opinion the more satisfactory procedure now being carried out in Florida is as follows: When a shortage of physicians exists in an area, the county medical society having jurisdiction over that area may request the services of a particular physician for the duration of the emergency. This person need not necessarily be licensed to practice in Florida; he must, however, be licensed in some state. Also, he must be a member in good standing of his medical society, must be a graduate of a recognized medical school and must otherwise meet all the requirements for admission to examination by the Florida State Board of Medical Examiners and the Basic Science Board of Florida. After clearance by the Committee on Procurement and Assignment, a certificate is issued to the physician chosen, which states: "At the request of the County Medical Society, Dr. .... is being allowed to practice in this area for the duration of the emergency." This is signed by me as Chief of the Emergency Medical Service for Florida, and a copy is sent to the secretary of the Board of Medical Examiners for its records. This system has numerous advantages. Control is retained by the county medical society in that no one can come into its area without its specific approval. The physician who comes in under this arrangement is assured of the good will and cooperation of the other physicians in the county for he is there at their request. It upholds the high standards at present in effect as such a certificate is issued to no one who is not properly qualified. This arrangement cannot extend beyond the period of the emergency because the agency issuing the certificates will itself be nonexistent when the emergency is over. It protects the physicians who have left their practices and homes to go into the service by assuring them that those who have come in during their absence will leave when they return.

This plan provides adequate medical care for the citizens of the state by bringing in physicians on a temporary basis who for the most part are good general practitioners, but who have reached an age at which they do not desire to attempt to pass the examination of the State Board of Medical Examiners, and who have no wish to continue in practice after the need is over. Most of them are coming out of retirement from patriotic motives and not because of financial need. We are indeed fortunate in Florida that this state is climatically desirable for older men for consequently we have a pool of physicians who can work here, but who are unable to withstand the rigors of the North. We have at the present time eleven physicians working in the state under this arrangement, and I have yet to hear a complaint from any member of the Association in any county in which it is in operation. Probably the greatest advantage of this plan is that it does away with all reasons for changing the laws of the state in reference to the medical practice act. We ourselves have set up a plan that affords Florida citizens the as-

surance of medical care, which after all is the reason commonly given for the removal of the barriers to free reciprocity and for the lowering of standards. If this plan, or a similar one, were put into effect by the profession in all other states, there could be no shadow of a legitimate excuse for revision of the laws. I personally am unalterably opposed to any change in our state laws that would allow reciprocity, or that would in any way lower the standards we have set up and maintained.

I wish now to express my thanks to the members of the Board of Governors of the Association, the Committee on Procurement and Assignment and the State Board of Medical Examiners, who have during this difficult period given so generously of their time and advice, who have considered so understandingly the problems facing us and who have supported the programs unanimously. The Association owes them a great debt of gratitude.

As a result of observation, consultation and much thought regarding the problems mentioned, I have arrived at a creed governing my conduct in dealing with these problems, which I think might well be adopted by all organized medicine:

CREED

1. I believe that all citizens of the state of Florida are entitled to adequate medical care.

2. I believe and know that a shortage of physicians exists in portions of the state and that this shortage, which may become greater, must be relieved.

3. I believe that relief should be given by and under the direct control of the Association and the other cooperating agencies.

4. I believe that there should be no change in our laws which might and probably would tend to destroy our high standard of practice.

5. I believe that it is our responsibility to our professional brothers who have sacrificed much to serve our country, to protect their interests and to preserve for them their practices until they return.

6. I believe that there will be a determined effort on the part of some political leaders to governmentalize the practice of medicine, and I am firmly of the opinion that the surest way to combat this is by offering a satisfactory solution to the problems which we know exist.

7. I believe the steps that have been taken in our state to solve the problems facing us best approach fulfillment of all the requirements stated, and, as far as I know, no state in the United States is meeting the demands of the unprecedented situation so successfully as is Florida.

8. I believe that the members of the Association will do their part as they have in the past to uphold those ideals which, while high, are not unattainable, and that they will continue to hold up the hands of those who are striving so diligently to maintain these same ideals.

9. I believe that the Florida Medical Association is the best, most forward-looking, most cohesive state association in the country and that we will go forward together on a road which will eventually lead us out of the maze of confusion to a future in which the dignity and integrity of our profession will be forever assured and in which we, the membership, will have a full voice in developing whatever plans affect us in the pursuit of our highest ambition. This ambition is that we may best serve the citizens of our state and nation in the belief that we know, better than any group outside our professional organization, how that service should be developed, distributed and maintained.

Box 3231

The Eleventh Annual Medical Short Course

WILL BE HELD AT THE

George Washington Hotel, Jacksonville

JUNE 21 THROUGH JUNE 26, 1943

For more complete information, see pages 534 and 535

PROCEEDINGS
Seventieth Annual Meeting
of the
FLORIDA MEDICAL ASSOCIATION
Held at JACKSONVILLE
APRIL 15 and 16, 1943

GENERAL SESSIONS

FIRST GENERAL SESSION

The Seventieth Annual Meeting of the Florida Medical Association was called to order at 1:47 p.m., Thursday, April 15, in the Ballroom of the George Washington Hotel, Jacksonville, by President Gilbert S. Osincup.

Invocation by Captain R. W. Shrum (Ch C) U.S.N., Naval Air Station, Jacksonville.

Dr. L. W. Blake, first vice president, took the chair and called on Dr. Gilbert S. Osincup to deliver the presidential address. (See page 509).

Dr. Blake relinquished the chair and turned the gavel over to President Osincup.

The following report of the secretary-treasurer and editor of the Journal, Dr. Shaler Richardson, and managing director, Dr. Stewart Thompson, was read by Dr. Richardson:

REPORT OF SECRETARY-TREASURER-EDITOR, DR. SHALER RICHARDSON, AND MANAGING DIRECTOR, DR. STEWART THOMPSON

Mr. Chairman, Members of the Association and Guests:

It is my privilege to present the eighteenth annual report that Dr. Thompson and I have prepared. We feel that the Association is in excellent condition, notwithstanding the fact that handicaps have been encountered and curtailments necessitated by the war effort. Many difficult problems have arisen during the fiscal year, which have been met and solved through the loyal support of our members.

The convention this year has been streamlined in order to use transportation and hotel facilities as little as possible. It has been limited to two half days in place of the usual three days. Meetings of the House of Delegates, and general sessions will be held, as provided by our constitution and by-laws, and authentic information will be brought to our members regarding the physician's responsibility in furnishing medical care to the armed services and to the citizens of our state.

We have in other ways striven to cooperate with the war effort. You will note that the badges are made of cardboard and ribbon, materials on which there is no priority. The programs you are using today are reprints from the April Journal. We have saved manpower and the funds of the Association by use of this simple program.

The plush covered booths usually provided for exhibitors have also been eliminated to avoid unnecessary use of transportation facilities. Cancelling the district meetings last fall was cooperation along the same line.

MEMBERSHIP

The membership at the end of 1942 totaled 1,461, as compared with 1,403 for the previous year, an increase of 58. One new society was organized during the year, the Nassau County Medical Society, whose application for charter will be presented at the House of Delegates' meeting this afternoon.

Membership includes four classifications: those paying annual dues, life members, honorary members, and members with the armed services. The by-laws provide that members who have been on the official roster for 35 years shall become life members. During the past fiscal year eleven regular members were advanced to life membership: Drs. E. W. Bitzer, Tampa; L. B. Bouchelle, New Smyrna Beach; E. M. Brevard, Tallahassee; Joseph Halton, Sarasota; John S. McEwan, Orlando: W. D. Nobles, Pensacola; Samuel Puleston, Sanford; William E. Ross, Jacksonville; John A. Simmons, Arcadia; David C. Thompson, Canal Point; and J. P. Tomlinson, Sr., Lake Wales.

An outstanding indication of the loyalty of our members is the fact that a number of life members continue to pay annual dues even though the by-laws specify that this is not an obligation.

In the 1943 Medical Directory, which is just off the press, symbols in the alphabetical list indicate the members who are classified as life, honorary, and with the armed services. We will, therefore, not burden this report with a repetition of this information.

ARMED SERVICES

So far we have a record of 411 members with the armed services. Every effort has been put forth to secure the names of members as they go into service, but it is very difficult to keep the information up-to-date. Periodically the list has been published in the Journal, and in each instance a request was made that omissions or corrections be reported to Box 1018, Jacksonville. Your April Journal has a complete list as of the date of issue. To maintain an authentic list, the cooperation of every reader of the Journal is solicited.

WAR BOND DONATIONS

Members with the armed services are not required to pay annual dues, which fact caused a financial problem. At $10 each, 411 service men will reduce the income $4,110 each year. Actually, the reduction will be slightly less, as a few members in service insist on paying their dues.

To protect the Association's reserve, with the approval of the Board of Governors, the Board of Past Presidents under the leadership of Dr. H. Mason Smith, decided to meet this financial problem by soliciting donations from the members at home, the income to be invested in war bonds. The membership responded generously to the call of the Board of Past Presidents; a total of $3,541.63 has been received. Of this amount, $3,356.63 was in cash and $185 in ten $25 bonds, the cash value of each being $18.50. The cash received has been invested in war bonds to the amount of $2,960. A small balance remains, which

will be invested as soon as the amount increases sufficiently to purchase another bond. For convenience, bonds are purchased in $1,000 denominations at a cost of $740 each.

By special arrangement with an official of the Federal Reserve Bank, donations received for the purchase of war bonds have been credited to the county and city from which the donations originated. Thus a donation received from any county in the state is credited to that county at the time the bond is purchased through the Federal Reserve Bank.

A number of members who joined the armed services paid their 1942 dues before leaving, so the deficit for the last fiscal year was not as great as it will be henceforth. Each year there will be a deficit of $4,110 plus $10 for each additional member who joins the armed services.

The April Journal contains the amount of donations received, by county societies, and the names of members who made donations.

MEDICOLEGAL ACTIVITIES

It is not the function of the State Medical Association to file suit against persons who practice medicine in Florida in violation of the Medical Practice Act. Nevertheless, the members of our Association are interested in having violators brought to justice. The public health will be best protected when the practice of medicine is limited to those who are legally licensed.

In addition to the splendid work of the State Board of Medical Examiners, the State Board of Health, through its Bureau of Narcotics, has made a real contribution in its effort to rid the state of illegal practitioners. Mr. M. H. Doss, director of the Bureau of Narcotics, in his annual report to Dr. Henry Hanson, State Health Officer, submitted some interesting facts. This report disclosed that 16 arrests had been made; sentences imposed by the Courts aggregated 3 years, 10 months; amount of fines imposed by the Courts totaled $340; defendants receiving suspended sentences were 4; prosecutions resulting in mistrials, 1; and the number of criminal cases pending Court action, 10. Mr. Doss and his inspectors did some very constructive work during 1942 and should receive hearty commendation from the practitioners of medicine in our state.

If there is an impostor or someone practicing medicine without a license in your district, contact Dr. Henry Hanson, State Health Officer, or Mr. M. H. Doss, of the State Board of Health, Jacksonville, in order that immediate investigation may be started.

FINANCES

Excluding donations, the income from all other sources during the past fiscal year totaled $19,303.98. Expenditures amounted to $18,846.85, which leaves a small balance of $457.13. This is not as rosy a picture as might appear at first glance. For instance, 277 members paid their current dues before entering military service. Had their dues not been received, there would have been a reduction of $2,770 in this year's income. The income during the past year was definitely below normal. The average annual receipts for the four previous years amounted to more than $22,000, as compared to the income of a little more than $19,000 for the last year. The average expenditures for the four previous years amounted to a little over $21,000 as compared with the expenditures last year of a little over $18,800. Every effort has been made to bolster the income as well as to keep expenses at a minimum.

Last year's income included earnings from advertising $5,147.48, subscriptions and miscellaneous sale of Journals and Directories $707.62 and interest on savings and investment $434.36. The earnings from technical exhibits this year amounted to $1,060.00.

Donations received for the purchase of war bonds, plus the small balance of $457.13 almost offset the dues of the present number of members in military service for one year. There will, however, be additional expenses during the coming year not experienced last year. For example, funds will be given to the Association's Committee on Legislation and Public Policy for legal services.

Additional donations will be necessary if the Association's activities are to continue on the present basis. Otherwise, it will be necessary to draw on the reserve, as there is no possibility of materially decreasing expenses without curtailing necessary activities.

The books and records of the Association are open to our members, and we will be glad to answer inquiries, as far as possible, of any nature. The books have been audited by C. H. Goodrich, and a certification thereof is incorporated in the statements at the end of this report.

1943 MEDICAL DIRECTORY

The sixth annual Florida Medical Directory is just off the press. Each member is entitled to one copy free of charge. Additional copies are $1.00.

The State Board of Health purchased 970 copies at a special rate of 50c each, to be mailed to doctors who register but are not members of our Association.

Twenty-three hundred copies of the Medical Directory were printed this year at a cost of $377.95. The income from advertising and sale of Directories totaled $810. While the Directory is now recognized as a necessity by our members and persons in allied fields, it is a satisfaction to know that the income from it is more than double the printing cost.

JOURNAL

One departure of the Journal this year was the advancement of the date of issue one month. The reason for the change is obvious. The Journal is now mailed so as to be received on or before the first day of the month shown on its cover. The convention program could, therefore, be included in the April Journal, the month in which the convention is held. It is much more interesting to read a Journal during the month of its date than the month following. The established custom of mailing the Journal at the end of the month seemed inappropriate to us, notwithstanding the fact that practically all state medical journals are mailed late in the month or even the first of the following month.

Before advancing the date on the Journal, we secured the approval of the Board of Governors and the director of the Cooperative Medical Advertising Bureau of the A. M. A. It is our hope that this advance of date will meet with general approval and add to the interest of its readers.

Beginning with the January 1942 Journal, white paper stock has been used for the cover with blue ink substituted for black. Advertisers have been permitted to use extra colors to make their advertisements more attractive. There is an added cost paid by the advertiser for each color used. To date, no criticisms have reached us, so it is taken for granted that the membership as a whole approves the more modern Journal cover.

Very soon there will be a shortage of scientific articles for publication in the Journal. There is now an opportunity for members to have their papers published with much less delay than has been possible in the past. If you are working on a scientific paper, you are urged to complete it and send it in for publication. The dearth of papers is caused by the cancellation of the district medical meetings, the omission of scientific sessions at the convention, and by the fact that many of our members are with the armed services or are struggling under the burden of additional practice.

So far we have been able to secure paper stock for the Journal, but the paper mills are experiencing difficulty with the manpower problem. Our printer has given us exceptional service under present conditions. If it were not for the personal interest he has taken in the Journal, we would undoubtedly face a very difficult problem.

As we have mentioned many times, this is your Journal, and we are trying to publish it in accordance with your wishes. Constructive criticisms are solicited.

Respectfully submitted,
Shaler Richardson, M. D.
Stewart G. Thompson.

CHARLES H. GOODRICH
Certified Public Accountant
JACKSONVILLE, FLORIDA

April 8, 1943

Dr. Shaler Richardson, Treasurer
Florida Medical Association, Incorporated
Jacksonvile, Florida

Dear Sir:

Pursuant with the terms of my engagement, I have examined the statements of Receipts and Disbursements of Florida Medical Association, Incorporated, furnished by the office of Dr. S. G. Thompson, Managing Director, for the period March 25, 1942 to and including March 29, 1943, together with the accompanying Exhibits "A" to "G" inclusive, and the consolidated Cash Statement.

These statements have been found in agreement with the books of account of the Association and correctly reflect the cash transactions for the period stated. Cancelled checks covering disbursements were checked to the records, found in order and in my opinion for proper purposes. All receipts covering cash collections were traced to the bank deposits and all bank balances have been reconciled with the books of account and independently verified by the depositories.

Treasury bond of a face value of $10,000.00 was verified as being with the Atlantic National Bank, as Custodian.

Income from advertising in the Association's Journal was verified substantially by comparison with a statement of contracts furnished by the Director's office.

Records of the various County Societies being inaccessible for the purpose of checking remittances for dues, attention is directed to Exhibit "D" herewith, which displays the detail regarding this matter.

Yours very truly,
C. H. Goodrich.

CONSOLIDATED CASH STATEMENT
March 25, 1942 through March 29, 1943

Receipts

Cash in Bank, March 25, 1942		$25,974.84
Dues and Entrance Fees Collected (Exhibit "D")	$12,080.00	
Earnings from Advertising (Exhibit "E")	5,147.48	
Subscription and Misc. Sale of Journal & Directory (Exhibit "F")	707.62	
Interest on Savings and Investment	434.36	
Cash Donations for Purchase of War Bonds	3,356.63	
Miscellaneous Income	4.52	
Earnings from Technical Exhibits (Exhibit "C")	930.00	22,660.61
Total Cash to be Accounted for		$48,635.45

Disbursements

General Fund Expenses (Exhibit "A")	$ 8,759.48	
Journal and Directory Expenses (Exhibit "B")	8,326.43	
Technical Exhibit Expenses (Exhibit "C") $1,048.87		
To Entertaining Society 84.00	1,132.87	
Committee Expenses (Exhibit "A")	69.04	
Furniture, Fixtures & Equipment	18.90	
Library	110.26	
Federal Tax	29.87	
Medicolegal Aid	400.00	
Investment—Purchase of War Bonds	2,960.00	21,806.85
Balance in Bank, March 29, 1943		$26,828.60

EXHIBIT "A"

CASH STATEMENT—GENERAL FUND
March 25, 1942 through March 29, 1943

Receipts

Cash as per last audit		$25,974.84
Back Dues Collected (Exhibit "D")	$3,110.00	
Current Dues Collected (Exhibit "D")	8,250.00	
Entrance Fees Collected (Exhibit "D")	720.00	12,080.00
Interest on Savings and Investment		434.36
Miscellaneous Income		4.52
Cash Donations for Purchase of War Bonds		3,356.63
Total Cash to be Accounted for		$41,850.35

Disbursements

Postage and Supplies	$ 297.24		
Telephone and Telegraph	128.82		
Salaries	7,025.88*		
Traveling Expense	48.06		
Delegates (2) Transp. to Atlantic City	152.57		
Legal Counsel	100.00		
Office Rent	720.00		
Towel Service	15.00		
Auditing Books	12.50		
Electrotypes	19.05		
Messenger Service	18.25		
Bank Exchange	3.01		
Custody of Bonds	10.00		
Photostats & Legal Copies	14.35		
Clipping Service	60.00		
Treasurer's Bond (1942 & 1943)	37.50		
Subscription—Times-Union	11.00		
Employers' Libility Insurance	14.00		
Constitution and By-Laws	48.00		
Repair & Service to Furn., Fix. & Equip.	16.35		
Incidental	7.90	8,759.48	
Committees:			
Council	8.25		
Miscellaneous Committee Expense	18.25		
Board of Governors	30.37		
War Participation	6.42		
Scientific Work	5.75	69.04	
Purchase of 4—$1,000 War Bonds at $740 each		2,960.00	
Furniture, Fixtures & Equipment		18.90	
Library		110.26	
Federal Tax		29.87	
Medicolegal Aid		400.00	
To Jrnl. & Directory Fund (Cost above Income)		2,471.33	
To Exhibit Fund (Cost above Income)		202.87	15,021.75
Cash Balance			$26,828.60

*Total Salaries. Victory Tax deducted from this amount and paid to Collector of Internal Revenue.

EXHIBIT "B"

CASH STATEMENT—JOURNAL AND DIRECTORY FUND

March 25, 1942 through March 29, 1943

Receipts

Cash as per last audit		$ 0.00
Earnings from Advertising (Exhibit "E")	$5,147.48	
Subscriptions & Misc. Sale (Exhibit "F")	707.62	
From General Fund	2,471.33	8,326.43
To be Accounted for		$8,326.43

Disbursements

Postage and Supplies	$ 296.54	
Printing and Stock	4,973.55	
Telephone and Telegraph	75.75	
Salaries	2,861.62*	
Dray	28.36	
Auditing Books	12.50	
Photostats and Legal Copies	9.10	
Messenger Service	2.85	
Express and Freight	.58	
Treasurer's Bond (1942 & 1943)	37.50	
Cuts and Repair of Cuts	13.07	
Addressograph Service and Repair	13.01	
Copyright, 1943 Directory	2.00	8,326.43
Cash Balance		$ 0.00

*Total Salaries. Victory Tax deducted from this amount and paid to Collector of Internal Revenue.

EXIIIBIT "C"

CASH STATEMENT—EXIIIBIT FUND

March 25, 1942 through March 29, 1943

Receipts

Cash as per last audit	$ 0.00
Earnings from Technical Exhibits	930.00
From General Fund	202.87
To be Accounted for	$1,132.87

Disbursements

Convention Expense:		
Postage and Supplies	$ 30.29	
Telephone and Telegraph	121.42	
Exhibit Booth Equip.	403.00	
Printing and Photostats.	10.94	
Programs	98.50	
Badges	31.58	
Misc. Expense and Employees' Travel	249.56	
News Service, Cuts & Mats	2.50	
Proceedings Reporter	91.58	
Express and Dray	3.00	
Salaries	6.50	1,048.87
To Entertaining Society (Palm Beach)	84.00	1,132.87
Cash Balance		$ 0.00

ASSETS AND LIABILITIES

March 29, 1943

Assets

Cash in Fla. Natl. Bank Checking Acct.	$13,289.94
Cash in Barnett Natl. Bank Checking Acct. (Postgraduate Course Committee Acct.)	1,110.06
General Fund—Accounts Receivable	1,430.00
Journal & Directory Fund—Accts. Receivable	652.30
Furniture, Fixtures & Equipment (less depreciation)	978.76
Library	791.96
Stationery Inventory	969.88
Savings: Atlantic National Bank	4,419.07
Barnett National Bank	9,119.59
Investments: Treasury Bond	10,178.13
War Savings Bonds	3,145.00
	$46,084.69

Liabilities

Postgraduate Course Committee	$ 1,110.06
Capital Account	44,974.63
	$46,084.69

MEDICAL POSTGRADUATE COURSE—I

September 22, 1942 through March 29, 1943

Receipts

Check from Dr. T. L. Montgomery, Philadelphia	$ 35.00
Check from Dr. G. C. Tillman, Gainesville	1,175.06
To be Accounted for	$1,210.06

Disbursements

Salary (1941-1942) Mrs. A. S. Morrow	$ 100.00
Balance in Bank	$1,110.06

EMERGENCY FUND—(MEMORANDUM NO. 6)

(Taken from Treasurer's Financial Statement)

March 25, 1942 through March 29, 1943

Debit

Balance on Hand, March 25, 1942 (Overdraft) (Memorandum No. 5)		$-1,173.17
Back Dues Collected (Exhibit "D") $3,110.00 (311 members at $2.50)	$ 777.50	
Current Dues Collected (Exhibit "D") $8,250.00 (825 members at $2.50)	2,062.50	2,840.00
To be Accounted for		$1,666.83
Less Amount Reserved for Working Budget and Expended		1,500.00
Balance		$ 166.83

Credit

Committee Expenses:		
Council	$ 8.25	
Board of Governors	30.37	
War Participation	6.42	
Scientific Work	5.75	
Miscellaneous Committee Expense	18.25	69.04
Balance		$ 97.79

EXHIBIT "D"

DUES AND ENTRANCE FEES COLLECTED MARCH 25, 1942 THROUGH MARCH 29, 1943

Name of Society	Total Members	No. Paid Members	No. in Arrears	1943 Dues Collected	Back Dues Collected	Entrance Fees
Alachua	28	22	6	150.00	80.00	10.00
Bay	14	12	2	60.00	20.00	10.00
Brevard	11	11	0	100.00	10.00	
Broward	41	41	0	260.00	20.00	40.00
Columbia	12	12	0	100.00		10.00
Dade	341	295	46	1,570.00	1,220.00	150.00
DeSoto-Hardee-Highlands-Charlotte-Glades	20	20	0	190.00	50.00	10.00
Duval	195	178	17	1,210.00	500.00	90.00
Escambia	50	48	2	300.00	40.00	10.00
Franklin-Gulf	5	5	0	40.00		
Hillsborough	104	87	17	630.00	200.00	30.00
Individuals	2	0	2			
Jackson	13	13	0	110.00	20.00	30.00
Lake	18	16	2	70.00	60.00	10.00
Lee	17	15	2	80.00	20.00	
Leon-Gadsden-Liberty-Wakulla-Jefferson	41	38	3	260.00	50.00	20.00
Madison-Suwannee	7	7	0	30.00	60.00	
Manatee	14	14	0	90.00		
Marion	29	27	2	170.00	30.00	10.00
Monroe	4	4	0	30.00		
Nassau	7	7	0	60.00		50.00
Orange	94	81	13	470.00	110.00	90.00
Palm Beach	68	61	7	440.00	230.00	20.00
Pasco-Hernando-Citrus	11	10	1	80.00	10.00	
Pinellas	105	100	5	670.00	40.00	60.00
Polk	62	60	2	430.00	120.00	20.00
Putnam	10	10	0	70.00	30.00	
St. Johns	12	12	0	70.00		
St. Lucie-Okeechobee-Indian River-Martin	17	16	1	90.00		
Sarasota	20	18	2	80.00	100.00	50.00
Seminole	11	10	1	50.00		
Taylor	5	4	1	30.00		
Volusia	44	35	9	170.00	90.00	
Walton-Okaloosa	6	6	0	50.00		
Washington-Holmes	6	6	0	40.00		
TOTALS	1,444	1,301	143	8,250.00	3,110.00	720.00
				3,110.00	Back dues Collected	
				11,360.00	Total dues Collected	
				720.00	Entrance fees Collected	
				$12,080.00	DUES AND ENTRANCE FEES	

EXHIBIT "E"

EARNINGS FROM ADVERTISING

March 25, 1942 through March 29, 1943

April, 1942	$ 369.64
May	338.05
June	380.18
July	350.94
August	399.36
September	271.11
October	409.62
November	370.22
December	519.05
January, 1943	284.71
February	448.98
March	492.75
	$4,634.61
Refund, A.M.A.	512.87
TOTAL	$5,147.48

EXHIBIT "F"

EARNINGS FROM SUBSCRIPTIONS AND MISCELLANEOUS SALE OF JOURNAL AND DIRECTORY

March 25, 1942 through March 29, 1943

April, 1942	$ 13.20
May	9.80
June	8.30
July	9.45
August	9.00
October (refund)	— 1.00
December	15.57
January, 1943	9.00
February	10.00
March	21.80
	$105.12
State Bd. of Health, 1942 Directory	602.50
	$707.62

The guest speaker, Dr. Charles W. Roberts of Atlanta, a member of the Board of Trustees of the A. M. A., was introduced by President Osincup.

Address, "Medical Stewardship in War and Peace," by Dr. Roberts.

Dr. E. F. Wahl of Thomasville and Dr. M. E. Winchester of Brunswick, official representatives of the Medical Association of Georgia, were introduced.

Announcement: Dr. Luther Holloway urged members and guests to attend the social hour preceding the Association dinner.

There being no further business, a motion to adjourn prevailed.

SECOND GENERAL SESSION

The meeting of the Florida Medical Association reconvened at 9:30 p.m. Thursday, April 15, 1943, in the Ballroom of the George Washington Hotel; President Osincup in the chair.

The meeting was called to order.

The guest speaker, Dr. George Baehr, Chief Medical Officer, Office of Civilian Defense, Washington, D. C., was introduced by President Osincup.

Address, "British and American Experiences in Civil Defense," by Dr. Baehr.

There being no further business a motion to adjourn prevailed.

THIRD GENERAL SESSION

The meeting of the Florida Medical Association reconvened at 11:15 a. m., April 16, 1943, in the ballroom of the George Washington Hotel. President Osincup in the Chair.

The meeting was called to order.

The guest speaker, Col. Sanford W. French, Chief of the Medical Service, Fourth Corps Command, U. S. Army, Atlanta, Ga., was introduced by President Osincup.

Address, "The Doctor in the War Effort," by Col. French.

Announcements—Recess.

FOURTH GENERAL SESSION

At 12 noon President Osincup called the meeting to order.

The first item of business was the election of officers.

Dr. John R. Boling of Tampa was nominated for president-elect by Dr. Walter C. Jones. Nomination seconded by Dr. Waas. Dr. Ferguson moved that nominations close and that the secretary cast a unanimous vote for Dr. Boling. Motion seconded and carried.

Dr. Osincup appointed Dr. Jones and Dr. Waas to escort Dr. Boling to the rostrum.

Dr. Boling: Mr. President and members of the Florida Medical Association: I am proud of this honor you have just conferred upon me. I am fully aware of the importance and of the seriousness of this office. Realizing how inadequately I am prepared at this time to follow in the footsteps of those men who have so adequately filled this office, I appreciate the year of training this Association so wisely provides for the president-elect. I promise, with your cooperation, the help of your incoming president and all those past presidents who have served you so well, that I will make every effort to prepare myself to be worthy of this honor.

Nominations for first vice president were called for. Dr. Louie Limbaugh of Jacksonville was nominated by Dr. Rowlett. Seconded by Dr. Blake.

Dr. Lloyd J. Netto of West Palm Beach was also nominated.

A motion was made, seconded and carried to close the nominations.

The Chair called for a ballot vote and appointed Drs. White, Jones and Turberville as tellers. The tellers announced that Dr. Limbaugh received 56 votes and Dr. Netto, 18.

The Chair declared Dr. Limbaugh elected first vice president.

Nominations for second vice president were called for. Dr. Lloyd J. Netto of West Palm Beach was nominated. Motion made and seconded that the nominations close and that the secretary cast a unanimous ballot for Dr. Netto. Motion carried.

Nominations for third vice president were called for. Dr. Carl E. Dunaway of Miami was nominated by Dr. H. Marshall Taylor. Motion made and seconded that nominations close and that the secretary cast a unanimous vote for Dr. Dunaway. Motion prevailed.

Nominations for secretary-treasurer and editor of the Journal were called for. Dr. Shaler Richardson of Jacksonville was nominated by Dr. Ferguson. Motion made and seconded to close the nominations and that the President cast a

unanimous vote for Dr. Richardson. Motion prevailed.

Dr. Richardson: I can assure you it will be a pleasure to start my nineteenth year as secretary of the Association.

Dr. Osincup: The Association has gone through a very critical period. Many difficult problems were faced. I think the next year and the one to follow will be still more critical. I bespeak for Dr. Peek and Dr. Boling the same splendid cooperation that you have afforded me.

The Chair requested Dr. Rowlett to escort Dr. Peek to the rostrum.

Dr. Peek: I am succeeding a man who has devoted a great deal of time to the presidency of the Florida Medical Association. I think he has done a wonderful job. Especially at this time did we need such an active man at the head of our organization.

At this time it gives me pleasure to call on Dr. H. Mason Smith, chairman of the Board of Past Presidents, to present the past president's emblem to the retiring president, Dr. Gilbert S. Osincup.

Dr. Smith: The ritual of presenting the past president's button to the retiring president was performed for many yeas by the late and beloved Dr. Ralph N. Greene. It is really your loss, Dr. Osincup, that he is not here today to perform this beautiful ritual, commemorating your outstanding career as president of the State Medical Association. It would be your just desert to receive a tribute such as he would pay you today.

The State Medical Association and organized medicine in general have been particularly fortunate in having you for president. We feel that you have carried into the government and into the office of civil defense the high principles of organized medicine. We feel that had we had an ultra conservative leader, as described by Dr. Roberts, or one classed as radical—in either case we should have suffered. But you have carried high ideals and principles into the government with you, held on to them with one hand, and adjusted social reforms and changes with the other. We are all grateful. You have gone through a trying period. Many times you have had to make decisions which were open to criticism. No man ever accomplished much without getting some critcism, and for every bit you received you earned an additional star in your crown.

At the request of the Chair, a rising vote of thanks was accorded to Dr. Osincup.

There being no further business, on motion duly made and seconded, the president sounded the gavel and declared the Seventieth Annual Meeting of the Florida Medical Association adjourned sine die.

HOUSE OF DELEGATES

FIRST HOUSE OF DELEGATES

The House of Delegates convened at 3:45 p.m., Thursday, April 15, 1943, in the Ballroom of the George Washington Hotel, Jacksonville, with Dr. Gilbert S. Osincup, president, in the chair. Delegates answering roll call are shown in regular type. Delegates not answering roll call are shown (*absent*).

DELEGATES

Alachua—George C. Tillman.
Bay—J. M. Nixon.
Brevard—T. C. Kenaston.
Broward—Robert L. Elliston, Elliott M. Hendricks.
Columbia—Harry S. Howell.
Dade—Walter C. Jones, Carl E. Dunaway, Homer L. Pearson, W. L. Fitzgerald, Wiley M. Sams, M. Jay Flipse, Colquitt Pearson, Perry D. Melvin, P. J. Manson, Scheffel Wright, F. A. Vogt, George D. Lilly, Elmo D. French, J. W. Snyder, Gerard Raap.
DeSoto-Hardee-Highlands-Charlotte-Glades—Allen A. Poucher.
Duval—T. Z. Cason, Robert B. McIver, W. McL. Shaw, Frederick J. Waas, Edward Jelks, H. Marshall Taylor, E. T. Sellers, Louie Limbaugh. (*Absent, T. S. Field*).
Escambia—James M. Hoffman, J. S. Turberville.
Franklin-Gulf—(*Absent, L. H. Bartee*).
Hillsborough—W. M. Rowlett, H. Mason Smith, E. F. Shaver. (*Absent, S. B. Forbes, B. W. Lowry*).
Jackson—Daniel A. McKinnon.
Lake—(*Absent, H. Spurgeon Cherry*).
Lee—(*Absent, W. H. Grace*).
Leon-Gadsden-Liberty-Waukulla-Jefferson—L. L. Dozier, Julius C. Davis.
Madison—(*Absent, J. M. Price*).
Manatee—(*Absent, W. D. Sugg*).
Marion—Harry F. Watt.
Monroe—James B. Parramore.
Nassau—George A. Dame.
Orange—Horace A. Day, John S. McEwan, Frank D. Gray, Charles J. Collins.
Palm Beach—W. W. George, Kenneth Montgomery, James L. Carlisle.
Pasco-Hernando-Citrus—W. W. Jones.
Pinellas—William M. Davis, A. L. Mills. (*Absent, W. C. McConnell, Annette M. Feaster, John A. Herring*).
Polk—J. R. Boulware, Herman Watson, R. H. Mooty.
Putnam—(*Absent, Bernard E. Kane*).
St. Johns—Herbert E. White.
St. Lucie-Okeechobee-Indian River-Martin—(*Absent, M. D. Council*).
Sarasota—(*Absent, A. O. Morton*).
Seminole—Leland H. Dame.
Taylor—W. J. Baker.
Volusia—(*Absent, Ludo von Meysenbug, Hugh West*).
Walton-Okaloosa—(*Absent, A. G. Williams*).
Washington-Holmes—(*Absent, B. W. Dalton*).
Association Officers—Gilbert S. Osincup, Eugene G. Peek, L. W. Blake, Lloyd J. Netto, Harrison A. Walker, Shaler Richardson.

The chair declared a quorum present.

There being no delegate present from DeSoto-Hardee-Highlands-Charlotte-Glades County Medical Society, it was moved and seconded that Dr. Allen A. Poucher be seated. Motion prevailed.

Application for charter was presented by the Nassau County Medical Society. It was moved by Dr. Lloyd J. Netto, and seconded, that the charter be granted. Motion prevailed.

It was moved by Dr. Leland Dame that the delegate from Nassau be seated. Motion seconded and carried.

Sixty-three delegates were seated.

It was moved and seconded that the minutes of the last meeting, as published in the May, 1942, issue of the Florida Medical Journal, be adopted. There being no corrections or amend-

ments, the minutes as published were adopted by unanimous vote.

Our delegates to the A. M. A. House of Delegates were then recognized.

Delegate Dr. Mallory: Our report has already been published in the Journal.

Delegate Dr. Jelks: I have no further report.

President Osincup called for the nomination of one delegate to the House of Delegates of the A. M. A. for a two-year term beginning January, 1944. Dr. John S. McEwan nominated Dr. Meredith Mallory. Dr. Walter Jones nominated Dr. Homer L. Pearson.

Motion prevailed that the nominations be closed and a ballot vote be cast. Dr. Van Schaick, Dr. Rowlett and Dr. Turberville were appointed tellers. Dr. Pearson received 28 votes, Dr. Mallory 24. Dr. Pearson declared delegate.

The chair called for nomination of an alternate. Dr. Mallory was nominated but requested that his nomination be withdrawn.

Dr. George C. Tillman was nominated by Dr. Blake. It was moved and seconded that the nominations be closed and Dr. Tillman declared alternate. Motion prevailed.

The chair announced the personnel of three reference committees as follows:

1. HEALTH AND EDUCATION:
   Herbert E. White, Chairman
   T. Z. Cason
   J. M. Hoffman
   Frank D. Gray
   Scheffel Wright
2. PUBLIC POLICY:
   Walter C. Jones, Chairman
   Edward Jelks
   Herman Watson
   Horace A. Day
   Lloyd J. Netto
3. FINANCE AND ADMINISTRATION:
   Shaler Richardson, Chairman
   H. Mason Smith
   William M. Davis
   Eugene G. Peek
   Harrison A. Walker

A resolution was read by Dr. Mallory concerning the creation by the A. M. A. of a committee on Medical Service as proposed in a resolution to be presented to the A. M. A. House of Delegates. On motion the resolution was received and referred by the chair to Reference Committee No. 2, Public Policy.

A resolution was read by Dr. Vogt concerning the program of service for crippled children. On motion the resolution was received and referred by the chair to Reference Committee No. 2, Public Policy.

Dr. Limbaugh moved that the date and place of the 1944 meeting of the Florida Medical Association be left to the Board of Governors. Seconded. Motion prevailed.

The report of the Board of Governors was read by Dr. Louie Limbaugh, chairman. On motion the report was received and referred by the chair to Reference Committee No. 3, Finance and Administration.

The report of the Committee on Scientific Work was read by Dr. Herbert E. White, chairman. On motion the report was received and referred by the chair to Reference Committee No. 1, Health and Education.

The report of the Committee on Legislation and Public Policy was read by Dr. H. D. Van Schaick, chairman. On motion the report was received and referred by the chair to Reference Committee No. 2, Public Policy.

The report of the Committee on Medical Education and Hospitals was read by Dr. Walter A. Weed, chairman. On motion the report was received and referred by the chair to Reference Committee No. 1, Health and Education.

In the absence of the chairman, Dr. Leigh F. Robinson, the report of the Committee on Public Relations was referred to Reference Committee No. 2, Public Policy.

The report of the Committee on Necrology was read by Dr. Gerry Holden, chairman. At the request of the president the members stood for a moment in silent respect to the memory of departed colleagues. On motion the report was then received and referred by the chair to Reference Committee No. 1, Health and Education.

The report of the Committee on Medical Postgraduate Course was read by Dr. T. Z. Cason, chairman. On motion this report was received and referred by the chair to Reference Committee No. 1, Health and Education.

The report of the Committee on Cancer Control was read by Dr. Hewitt Johnston, chairman. On motion this report was received and referred by the chair to Reference Committee No. 1, Health and Education.

The report of the Committee on Medical Economics was read by Dr. Harrison A. Walker, chairman. On motion this report was received and referred by the chair to Reference Committee No. 2, Public Policy.

In the absence of the chairman, Dr. E. T. Sellers, no report was made by the Committee on Venereal Disease Control.

The report of the Committee on Interrelationship was read by Dr. D. A. McKinnon, chairman. On motion this report was received and referred by the chair to Reference Committee No. 2, Public Policy.

In the absence of the chairman, Dr. W. C. Blake, the report of the Committee on Tuberculosis and Public Health was referred to Reference Committee No. 1, Health and Education.

No report was made by the Committee on State Controlled Medical Institutions. Dr. H. Mason Smith, chairman, stated that Dr. Osincup had assumed a large part of the work formerly handled by this Committee.

The report of the Board of Past Presidents was read by Dr. H. Mason Smith, chairman. On motion this report was received and referred by the chair to Reference Committee No. 3, Finance and Administration.

In the absence of the chairman, Dr. S. R. Norris, the report of the Committee on Maternal Welfare was referred to Reference Committee No. 1, Health and Education.

In the absence of the chairman, Dr. George L. Cook, no report was made for the Committee on Child Health.

The report of the Committee on Conservation of Vision was read by Dr. Shaler Richardson, chairman. On motion this report was received and referred by the chair to Reference Committee No. 1, Health and Education.

The report of the Advisory Committee to the Woman's Auxiliary was called for. Dr. George C. Tillman, chairman, stated that this Committee had received no requests for advice and could therefore offer no report.

The report of the Committee as Representatives to the Industrial Council was called for. Dr. Richard H. Walker, chairman, stated that this Committee had no report to offer.

The report of Council was read by Dr. Lloyd J. Netto, chairman. On motion this report was received and referred by the chair to Reference Committee No. 3, Finance and Administration.

The report of the Committee on War Participation was read by Dr. Edward Jelks, chairman. On motion this report was received and referred by the chair to Reference Committee No. 2, Public Policy.

The report of the Committee on Publication was called for. Dr. Herman Watson, chairman, stated that his Committee had no report to offer.

The chair called for new business and Dr. Walter C. Jones read a resolution from the Dade County Medical Society providing that members in good standing who entered the United States Public Health Service would be continued as members in good standing without the payment of dues. On motion, this resolution was received and referred by the chair to Reference Committee No. 3, Finance and Administration.

Dr. Jones also read a proposed change in the constitution and by-laws from the Dade County Medical Society concerning eligibility to hold office in the Association. On motion this proposed amendment was received and referred by the chair to Reference Committee No. 3, Finance and Administration.

Announcements were made as to the time and place of the Association dinner.

There being no further business to come before the meeting, on motion seconded and carried, the House recessed to reconvene Friday, April 16 at 9:30 a.m.

SECOND HOUSE OF DELEGATES

The House of Delegates reconvened at 9:40 a.m., Friday, April 16, 1943, in the Ballroom of the George Washington Hotel, Jacksonville; President Osincup in the chair. Delegates answering roll call are shown in regular type. Delegates not answering roll call are shown (*absent*).

DELEGATES

Alachua—George C. Tillman.
Bay—(*Absent, J. M. Nixon*).
Brevard—(*Absent, T. C. Kenaston*).
Broward—Robert L. Elliston, Elliott M. Hendricks.
Columbia—Harry S. Howell.
Dade—Walter C. Jones, Carl E. Dunaway, Homer L. Pearson, W. L. Fitzgerald, Wiley M. Sams, M. Jay Flipse, Colquitt Pearson, P. J. Manson, F. A. Vogt, George D. Lilly, Elmo D. French, J. W. Snyder, Gerard Raap. (*Absent, Perry D. Melvin, Scheffel Wright*).
DeSoto-Hardee-Highlands-Charlotte-Glades—(*Absent, A. A. Poucher*).
Duval—T. Z. Cason, Robert B. McIver, W. McL. Shaw, Frederick J. Waas, Edward Jelks, H. Marshall Taylor, E. T. Sellers, Louie Limbaugh. (*Absent, T. S. Field*).
Escambia—James M. Hoffman, J. S. Turberville.
Franklin-Gulf—(*Absent, L. H. Bartee*).
Hillsborough—W. M. Rowlett, H. Mason Smith, E. F. Shaver. (*Absent, S. B. Forbes, B W. Lowry*).
Jackson—Daniel A. McKinnon.
Lake—(*Absent, H Spurgeon Cherry*).
Lee—(*Absent, W. H. Grace*).
Leon-Gadsden-Liberty-Waukulla-Jefferson—L. L. Dozier, Julius C. Davis.
Madison—(*Absent, J. M. Price*).
Manatee—(*Absent, W .D. Sugg*).
Marion—Harry F. Watt.
Monroe—James B. Parramore.
Nassau—George A. Dame.

Orange—Horace A. Day, John S. McEwan, Frank D. Gray, Charles J. Collins.
Palm Beach—W. W. George, Kenneth Montgomery, James L. Carlisle.
Pasco-Hernando-Citrus—W. W. Jones.
Pinellas—William M. Davis, A. L. Mills. (*Absent, W. C. McConnell, Annette M. Feaster, John A. Herring*).
Polk—J. R. Boulware, Herman Watson, R. H. Mooty.
Putnam—(*Absent, Bernard E. Kane*).
St. Johns—Herbert E. White.
St. Lucie-Okeechobee-Indian River-Martin—(*Absent, M. D. Council*).
Sarasota—(*Absent, A. O. Morton*).
Seminole—Leland H .Dame.
Taylor—(*Absent, W. J. Baker*).
Volusia—(*Absent, Ludo von Meysenbug, Hugh West*).
Walton-Okaloosa—(*Absent, A. G. Williams*).
Washington Holmes—(*Absent, B. W. Dalton*).
Association Officers—Gilbert S. Osincup, Eugene G. Peek, L. W. Blake, Lloyd J. Netto, Harrison A. Walker, Shaler Richardson.

Fifty-seven delegates answered roll call and the chair declared a quorum present.

The meeting was called to order.

REPORT OF REFERENCE COMMITTEE No. 1

Dr. Herbert E. White, chairman of Reference Committee No. 1, Health and Education, was recognized and asked to present the recommendations of that committee.

"The Committee recommends the adoption and publication of the report of the Committee on Scientific Work."

Motion made and seconded that the report be adopted and published. Motion prevailed.

REPORT OF COMMITTEE ON SCIENTIFIC WORK

The report of our committee this year will be very brief. The regular scientific sessions are omitted for reasons which are obvious.

On December 6, 1942, I was invited to attend a meeting of the Board of Governors, as chairman of the Association's Committee on Scientific Work. At this meeting it was decided to have three invited speakers to deliver addresses on subjects pertaining to the physicians' part in the war effort. The three distinguished speakers whose names appear on your program were secured by the president and secretary of the Association, and the Committee on Scientific Work.

Respectfully submitted,
Herbert E. White, *Chairman.*

"The Committee recommends the adoption and publication of the report of the Committee on Medical Education and Hospitals."

Motion made and seconded that the report be adopted and published. Motion prevailed.

REPORT OF COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

Several months ago I conferred with our President, Col. Osincup, as to my duties as chairman of the Committee on Medical Education and Hospitals, at which time he advised me that because of the exigencies incident to the war situation, a meeting of the Committee is unnecessary and probably inadvisable at this time.

Therefore, the Committee has been inactive and there is nothing further to report.

Respectfully submitted,
Walter A. Weed, *Chairman.*

"The Committee recommends the adoption and publication of the report of the Committee on Medical Postgraduate Course."

Motion made and seconded that the report be adopted and published. Motion prevailed.

REPORT OF THE COMMITTEE ON MEDICAL POST-GRADUATE COURSE

In spite of transportation difficulties, this committee continued to function and carry out the duties assigned to it. As indicated in President Osincup's annual message to the Association and in an editorial published in a recent issue of the Journal, the State Board of Control for higher education in Florida has established a medical department in the Graduate School of the University of Florida. Your chairman has been appointed Director of this department and the Postgraduate Committee is officially designated as advisor and consultant in connection with the department's activities. Essentially there will be no change in the present method of handling graduate education. As approved by the House of Delegates at the session in Hollywood last year, the committee has proceeded to enlarge its functions. As soon as the plans now under way are completed, graduate education will be offered the year around to the doctors of Florida.

The attendance last year, which was 195, exceeded by more than 50 any previous attendance at the Postgraduate Short Course. Of these, 46 were in the armed services and 9 were Negro physicians. We were quite pleased with the interest shown by the Negro doctors.

The week's graduate course this year will be held from June 21 to 26, inclusive, at the George Washington Hotel in Jacksonville. The faculty will be of the usual high standard.

The original sum appropriated by the Florida Medical Association for carrying on the graduate work was $1,000. Dr. R. H. McGinnis made a gift a few years ago of $100. Our balance in the bank as of today is $1,110.06. All debts are paid.

Respectfully submitted,
T. Z. Cason, *Chairman.*

"The Committee recommends the adoption and publication of the report of the Committee on Cancer Control; that the action of the committee be commended but its attention called to the fact that these things are supposed to come through the state organizations set up for this purpose."

Motion made and seconded that the report be adopted and published; that the action of the committee be commended but that its attention be called to the fact that these things are supposed to come through the state organizations set up for this purpose. There was no discussion and the motion prevailed.

REPORT OF COMMITTEE ON CANCER CONTROL

This report consists not of what the Executive Committee of Cancer Control has done, but what I think it has not done but should do.

This is the third year I have been a member of the Committee. We have met once or twice a year and discussed more or less what we considered our function as head of the cancer control in the State and little else.

I was appointed chairman in November, to fill the unexpired term of Chairman Levin who had gone into Service. Dr. Owen, another member, is also in Service.

This leaves three members. I have not called a meeting of the committee because of gas rationing and the difficulty of travel, especially when two of us live five hundred miles apart, Dr. Hoffman being in Pensacola.

The biggest work to be done and the most to be accomplished is through the Women's Field Army. They should be encouraged and helped. My opinion is that they have had too little encouragement and just as little help from the members of the State Medical Association.

I would like to submit the following recommendations which, if adopted and carried out, would be a great improvement over past performances:

1. The state committeeman in each district should be chairman of a committee in his district.

2. He should appoint one or more members from each component society in his district.

3. This committee should have a member from each county, so that each county in the state would be represented directly.

4. The chairman should call these committeemen together twice a year, the first meeting to be called within four months after appointments are made.

5. The duty of the District Committee should be to assist, advise, and encourage the Women's Field Army in their respective counties, in every way possible, especially in giving talks to schools and gatherings when requested to do so by any member of the Field Army.

(Note: My opinion is that the men on these committees should be members not holding state appointments, especially the very busy ones. This would be a good way to get the inactive members to become more active).

And now, as to the Women's Field Army: the State Commander, Mrs. A. Malcolm Smith, is an ardent and enthusiastic worker. She has done almost all of the work with little help and at a minimum expense. She has met with many discouragements, yet she has gone on with her task—and a task it is!

The success of this whole cancer effort in the state depends on the Women's Field Army; and if the medical profession does not support this Army better in the future, the cancer control program will have little or no success.

Respectfully submitted,
Hewitt Johnston, M. D., *Chairman.*

"The Committee recommends the adoption and publication of the report of the Committee on Conservation of Vision."

Motion made and seconded that the report be adopted and published. Motion prevailed.

REPORT OF COMMITTEE ON CONSERVATION OF VISION

The Committee on Conservation of Vision has cooperated with the Florida Council for the Blind in planning and carrying out a program for the care of the indigent blind of the state.

The plan is for medical service to be rendered gratis in the various medical centers of the state by qualified members of our Association. The Florida Council for the Blind is defraying minimum hospital costs when hospitalization is necessary.

Respectfully submitted,
Shaler Richardson, *Chairman.*

"The Committee recommends that the report of the Committee on Tuberculosis and Public Health be adopted and published."

Motion made and seconded that the report be adopted and published. Motion prevailed.

REPORT OF COMMITTEE ON TUBERCULOSIS AND PUBLIC HEALTH

The Committee held during the year one called meeting and four meetings by mail.

The Committee has cooperated with the State Department of Education and the State Board of Health in a study to ascertain what has been done toward the roentgen examination of the chests of teachers and other school personnel. A questionnaire was sent to each county superintendent of public instruction requesting information as to what was being done in their counties.

The committee has continued its efforts to insure protection from tuberculosis of students in nurses' training schools. Recommendations were made in line with policies recommended by the National Tuberculosis Association, American Trudeau Society, and other professional groups. Reports from training schools revealed that proper protection is now given student nurses.

The committee together with the Florida Radiological Society and state and local tuberculosis associations worked with the Navy Recruiting Station at Jacksonville in a plan to have roentgen examination of the chest given to men suspected of having tuberculosis who requested enlistment in the Navy, from which would be determined their fitness for service. A special rate was developed to be paid radiologists by the county tuberculosis association in the county of which the enlistee was a legal resident.

The committee has continued its cooperation with the State Tuberculosis Sanatorium, the State Defense Council and the Florida Tuberculosis and Health Association in the establishment of pneumothorax refill stations at strategic points throughout the state. Stations have been established, physicians trained and equipment purchased in six counties throughout the state with several others pending at this time.

The committee has also continued its cooperation with the Florida Tuberculosis and Health Association by approving the distribution of films and pamphlets on tuberculosis to the public and the distribution of Tuberculosis Abstracts to physicians throughout the state.

Respectfully submitted,
W. C. Blake, *Chairman.*

"The Committee recommends the adoption and publication of the report of the Committee on Maternal Welfare."

Motion made and seconded that the report be adopted and published. Motion prevailed.

REPORT OF COMMITTEE ON MATERNAL WELFARE

Due to the stringencies of war, this committee has not functioned actively during the past year. Some of the members of the committee are on active duty with the Armed Forces. The ones remaining are greatly overworked. We, therefore, deemed it inadvisable to attempt any new projects.

We have cooperated throughout the year with the Director of the Maternal Welfare Department of the State Board of Health. This department has worked out satisfactory arrangements to secure hospital facilities for delivery of wives of enlisted personnel of the United States Army. This is financed by the Federal Government.

We feel that under conditions existing the activities of this committee will be largely limited to continuous cooperation with the Maternal Welfare Department of the State Board of Health.

Respectfully submitted,
S. R. Norris, *Chairman.*

REPORT OF REFERENCE COMMITTEE No. 2

Dr. Walter C. Jones, chairman of Reference Committee No. 2, Public Policy, was recognized and asked to present the recommendations of that committee.

"The Committee does not recommend the adoption of the resolution presented by Dr. Mallory concerning the creation of a Committee on Medical Service.

Motion made that the resolution be not adopted and not published. Motion prevailed.

"The Committee recommends that the resolution relative to the Crippled Children's Commission be approved with the exception of deleting the words 'and directed'."

It was moved and seconded that the resolution as amended by the Committee be adopted. Motion prevailed.

RESOLUTION

WHEREAS, the Florida Crippled Children's Commission since January 1939, through its medical personnel and professional advisory committee, has administered a program of services for crippled children on the basis of decentralized services, that is, surgery, nursing, physiotherapy, hospitalization and convalescent care, and

WHEREAS, this type of program of decentralized services under qualified medical supervision has proved to be the most proficient and efficient in reaching and curing, or rehabilitating, more crippled children than any other type of program and thereby renders services on the most economic basis, and

WHEREAS, this type of program of decentralized services under qualified medical supervision complies with the provision of the National Social Security Act and thereby assures the State of receiving federal funds for the purpose of providing services for crippled children; Now, therefore, be it

RESOLVED by the Florida Medical Association that this Association does hereby recommend and urge that no legislation be entertained or passed at the 1943 session of Legislature that may interfere or change in any respect or jeopardize the present program of service for crippled children as now authorized under the present State statute and as administered by the Florida Crippled Children's Commission. And, furthermore, that the Florida Crippled Children's Commission have the authority to coordinate the various societies organized for crippled children.

SECOND, that the Secretary of the Florida Medical Association be, and he is hereby authorized to deliver to the Governor of the State of Florida and each member of the Senate and each member of the House of Representatives a qualified copy of this resolution at the earliest practicable date.

"The Committee recommends the approval of the report of the Committee on Public Relations and that it be published."

It was so moved and seconded. Motion prevailed.

REPORT OF COMMITTEE ON PUBLIC RELATIONS

Because of the war, communication facilities have made it practically impossible to organize and develop any new programs during the year. Nor for the same reason has it been practical to carry out present plans.

The Committee at all times stands ready with sufficient means for disseminating campaigns of propaganda as may be determined by the Board of Governors.

Respectfully submitted,
Leigh F. Robinson, *Chairman.*

"The Committee recommends approval of the report of the Committee on Necrology."

Motion made and seconded that this report be received and published. Motion prevailed.

REPORT OF COMMITTEE ON NECROLOGY

During the past fiscal year our Association lost by death the members whose names are listed below:

William P. Adamson, Tampa
Omer F. Allen, Miami
James M. Anderson, St. Petersburg
Robert L. Cline, Lakeland
Daniel N. Cone, Jacksonville
Philip Finkle, Brooklyn, N. Y.
Gladstone E. Francisco, Miami
Robert E. Gilbert, Winter Haven
John R. Hatfield, Orlando
George M. Lochner, St. Petersburg
Clifford M. Mitchell, Sanford
David Rose, Sebastian
Oswald F. Schiffli, Clewiston
John L. Summerlin, Gainesville
Margaret B. Williams, Miami
William J. Williams, Cassia

When possible, obituaries have appeared in the Journal relative to the deaths of these doctors. Tributes have been paid to them in the different communities where they have practiced.

May we at this time stand in a moment of silence, in reverence and respect to the memory of our departed colleagues.

Respectfully submitted,
Gerry R. Holden, *Chairman.*

"The Committee recommends approval of the report of the Committee on Interrelationship."

Motion made and seconded that this report be received and published in the Journal. Motion prevailed.

REPORT OF COMMITTEE ON INTERRELATIONSHIP

The calling off of our sectional meetings as well as the postponing of many others during the past year has no doubt limited the opportunities for the advancement of interrelations. However, on the other hand, at county and semirural meetings there is a noticeable tendency towards a better understanding among the fellows.

There seems to be a willingness to discuss the management and treatment of patients, the pitfalls as well as the successes, and a willingness to seek earlier consultation, not waiting until it is too late for an associate to do more than share the responsibility of an impending death.

Good will among doctors is a priceless asset. It is valuable not alone to the individual physician but is a constant contribution to the molding of a better profession to hand down to the on-coming generations.

Antagonism and opposition should have no place among doctors. Together we can build an organization so strong that the politicians will recognize the feasibility of keeping their hands off. If opposed to one another, not one of us will profit.

Respectfully submitted,
Daniel A. McKinnon, *Chairman.*

"The Committee recommends the approval of the report of the Committee on War Participation."

Motion made and seconded that this report be received and published in the Journal. Motion prevailed.

REPORT OF WAR PARTICIPATION COMMITTEE

Since the work of the War Participation Committee and the Procurement and Assignment Committee of Florida is so interrelated, and since the personnel of the two committees is the same, this report will make no distinction between the activities of the two bodies. They are both composed of a state committee with a represenative from each district, and county committees corresponding to and composed of members of each of the component county medical societies.

During the past year three meetings of the state committee were held in Jacksonville. At each of these there was a 100 per cent representation from each district. The state chairman attended one meeting in Washington and one in Atlanta. These meetings were attended by state chairmen for the purpose of discussing and receiving instructions as to what was to be expected of the Procurement and Assignment Service in the various states.

With the active cooperation of the doctors of Florida and the procurement and assignment organizations, our quota of doctors for 1942 was readily obtained. To date this year we have also furnished 92 per cent of the quota set for 1943. Information as to how many doctors will be needed to bring our quota up to 100 per cent has not been received. A large part of the credit for recruiting is due the Medical Officers' Recruiting Board which worked last year so ably under the chairmanship of Major Walter E. Murphree. Because the results in obtaining doctors were so successful, the recruiting board was disbanded last fall. Since then commissions have been granted through the usual military channels.

In spite of the wholehearted volunteering of doctors, the Procurement and Assignment Service of Florida has been able to maintain in most communities an adequate proportion between doctors and population. The average for the state is one doctor to 2,193 population. This does not mean, however, that certain communities are not now in real need of more doctors. In most of these instances the shortage was created by an increase in population, rather than by a diminution of the number of physicians.

Realizing the necessity for accurate information if we were to do a satisfactory job, the State Committee on Procurement and Assignment conducted a survey of each county. The facts obtained have been compiled in the central office in the form of an individual roster of physicians and summaries of facts for each county bearing upon the need for doctors. The major part of the work of compilation was done by the local county committees. Results of studies from each county committee were forwarded to the member of the state committee serving that district. In turn, the members of the state committee together studied the information and from it made recommendations and adopted methods of procedure for the state.

The work for the coming year is threefold: In the first place, the need of the military forces for some additional doctors from Florida must be met. Those doctors who are in the age group over which the Selective Service has jurisdiction will be declared available for military duty unless some unusual circumstance makes them essential to the community. In the second place, the committee should continue to insist that some doctors who desire to volunteer should remain at home because their communities need them badly. In the third place, doctors must be obtained for certain communities and areas. Providing for the last need would be much easier if physicians who are disqualified physically for military service would move from an area in which they have been declared nonessential to another location in Florida where there is a shortage of physicians. Since it has not proved practical to move physicians from one part of the state to another, there has been no choice except to relocate doctors from without the state into the areas which are short of physicians.

With the cooperation of the Civilian Defense Agencies, the Board of Medical Examiners, the U. S. Public Health Service, the State Board of Health, the Board of Governors of the Florida Medical Association and the Procurement and Assignment Service, a procedure for relocating doctors from out of the state has been put into operation. Thereby a number of doctors have been supplied to areas where they were severely needed. In his presidential address Dr. Osincup has outlined the methods followed.

Realizing that it is the responsibility of organized medicine in Florida to supply doctors for the military forces and the civilian population, and knowing from reliable sources that the need in both instances is real and no doubt will continue during the war, your committee is of the opinion that by fulfilling the obligation we have accepted, organized medicine will justify in a convincing manner its past claim that doctors are the ones who know best how to, and can most successfully provide medical care. Success in our present endeavor will give us a well deserved advantage in the period of readjustment after the war.

Respectfully submitted,
Edward Jelks, *Chairman.*

"The Committee recommends the adoption of the report of the Committee on Legislation and Public Policy, except that part which refers to the formation of a committee composed of a representative from each county medical society; that the intention of this part of the report be acted upon by the Board of Governors to make the necessary provision for such a committee if thought advisable."

Motion made and seconded that the report as amended be received and published. Motion prevailed.

REPORT OF COMMITTEE ON LEGISLATION AND PUBLIC POLICY

The Florida State Legislature opened on Tuesday, April 6, 1943. It is hoped that no bills will be introduced that will be detrimental to the public health of the state or the proper practice of medicine. With approximately one-third of our members with the armed services, it would be most uncalled for to have their status as practicing physicians altered while they were away, serving their country.

In order to strengthen our position and lay the groundwork for a better functioning and more active organization, the president of each county medical society was asked to select one member of his society who would familiarize himself with the work, and act as a liaison between our committee and the members of the society. It is a pleasure to report the hearty response from the presidents of county medical societies. These appointees will in no way lessen or take over the activities of the members of the Committee on Legislation and Public Policy.

At the request of our incoming president, Dr. Peek, I have been instructed to carry on the work that has been already begun, until the adjournment of the present Legislature. Dr. W. M. Rowlett, the new chairman of the committee, is already active and has assured us of his full cooperation during the present session of the Legislature.

Respectfully submitted,
Harold D. Van Schaick, *Chairman.*

"It is the opinion of Reference Committee No. 2 that the schedule of fees suggested by our Economics Committee may be adopted as a guide but that 'the fees set out in this schedule should not exceed the prevailing charges in the community where the treatment is given for similar treatment of persons of like standard of living.'

"Committee No. 2 further recognizes the fact that numerous conditions arise in the treatment of industrial cases which are not specified in this schedule and that the above opinion should act as a guide in such circumstances."

Motion by Dr. Jones that the report be received and the essential parts be published in the Journal. Seconded by Dr. Turberville. In a general discussion, Drs. Vogt, Netto, Walker, Jones, Turberville, Osincup and Carlisle took part. Question called for and motion carried.

REPORT OF COMMITTEE ON MEDICAL ECONOMICS

The report from this committee for the past two years has been nil. This time it is quite the opposite. The fee schedule has been in marked controversy for a long time. At our last meeting the president of this Association was instructed to appoint a committee comprised of members from the Economics Committee, the Florida Industrial Surgeons, and the Board of Governors of the Association.

This committee was to meet with the Industrial Commission of Tallahassee and the Insurance Carriers. The purpose was to come to an agreement on the fee schedule for the Florida Medical Association and its components, the medical societies, in respect to medical compensation.

This procedure was instigated by the Legislature of 1941 calling for a mandatory action of the Industrial Commission to have provision for the adoption of a schedule of charges.

Therefore, Mr. Walter Rountree, Industrial Commissioner, and the members of the Industrial Commission, Chairman Boyce A. Williams, Mr. A. W. Ritzaur, and Mr. M. J. Foley called a meeting in Tallahassee on June 25, 1942.

We have a resume of the report of the Industrial Commission meeting held in Tallahassee on June 25, 1942. Also we have a report of the subcommittee, appointed at the Tallahassee meeting, which met at Jacksonville on August 18, 1942. This latter report embodies the recommendations of a revised set of fees to be charged. A copy of the original fee schedule and a copy of the revised fee schedule are attached.* In addition to these reports, we have the interpretation of the Attorney General and the Assistant Attorney General of the State of Florida.

I will make a resolution which will represent the opinion and recommendation of the Chairman of the Economics Committee and the Industrial Surgeons, as well as the representative of the Florida Medical Association's Board of Governors.

Therefore, be it resolved that the House of Delegates of the Florida Medical Association go on record as adopting this report and also that they recommend that the component societies adopt this report and schedules of fees. And further resolve that this House of Delegates express their wish and desire that the executives of the Florida State Industrial Commission, Florida Medical Association follow this recommendation and see to it that a committee be appointed by the Florida Medical Association, the Insurance Carriers, and the Florida State Industrial Commission, such a committee to be given sufficient authority to act in investigation and correction of the acts of doctors who continuously or repeatedly fail to abide by the dictates of this committee report, as well as the insured or claim agents who likewise fail to abide and practice according to the dictates of this committee report.

I recommended that this report be adopted.

Respectfully submitted,
Harrison A. Walker, M. D., *Chairman.*

Mimeographed copy of revised fee schedule will be furnished to any member of the Florida Medical Association on request.

REPORT OF REFERENCE COMMITTEE No. 3

Dr. Shaler Richardson, chairman of Reference Committee No. 3, Finance and Administration, was recognized and asked to present the recommendations of that committee.

"The Committee recommends that the report of the Board of Past Presidents be approved with commendation for its work." Motion made and seconded that this report be received and published in the Journal. Motion prevailed.

REPORT OF BOARD OF PAST PRESIDENTS

When the late Dr. W. P. Adamson, chairman of the Board fo Past Presidents, requested me last October to assume the chairmanship of the campaign to acquire funds in the form of purchased United States Bonds to make up the deficit in the treasury of the State Medical Association that was caused by the entree into the armed services of approximately four hundred members, there was quite a while that I considered doing this with reluctance.

On further consideration, however, the fact that this gesture should be made to our fellow members who have gone into the armed services, in view of the sacrifice they are making in leaving their homes and their practice and their exposing themselves to the hazards of war, while we here at home make the money that they would have been making, made this proposition appeal to me with a great deal of force, and I felt that this was one service that I should render even in spite of the fact that I felt I had already reached the limit of my capacity with the work that I was doing.

In view of the fact that transportation facilities are so difficult, the campaign has had to be conducted entirely by correspondence, and the first thing done was to send a letter to each past president explaining the campaign and requesting him to appoint deputies in the various counties of his territory. The next thing was to send a letter explaining the campaign to each deputy, and finally a letter explaining the campaign and urging contributions was sent to each member of the State Medical Association.

The day of November 6, 1942, was spent in the headquarters office in Jacksonville outlining the campaign and several contacts were made over the telephone.

Since then I have made a personal appeal to the members of the Hillsborough County Medical Society; on January 20th, to the members of the Orange County Medical Society; on February 12th, to the members of the Pinellas County Medical Society, and on March 10th, I attended the Polk County Medical Society and made an appeal for contributions there.

The tabulated list of contributions which appeared in the April Journal shows the results of these appeals in the form of letters and in the form of personal appeals before the county medical societies. Cash has been received in the amount of $3,459.13; bonds $185.00, totaling $3,644.13.

There are many comments that could be made about the reaction to this campagin. Resistance has been met

in a few instances in the most unexpected places from some members who apparently are more obligated to the State Medical Association than most of the others for honors received and for support throughout the years in their scientific and professional progress. However, these disappointments have been overcome by the very generous responses from other members. I wish to mention at this time the great work done by Dr. Gerry Holden in his district, as his district has shown up better than any other in the State and in his district we have had more large contributions. Dr. Holden has, indeed, been very energetic and has to be commended, and I feel that the campaign would have gone over better had he been in charge of the state.

I wish also to thank the Duval County Medical Society and the doctors of Jacksonville for their generosity toward this campaign, and when criticism is heard by me to the effect that the Jacksonville doctors get more than their share of honors and assets of the State Medical Association, which is perfectly false and out of keeping with the facts, I can reply that they deserve more than the doctors of any other section as in this case as in other instances, they have supported the State Medical Association more generously than any other group.

Respectfully submitted,
H. Mason Smith, M. D., *Chairman.*

"This Committee recommends that the report of the Council be approved."

Motion made and seconded that this report be received and published in the Journal. Motion prevailed.

REPORT OF THE COUNCIL

On August 11, 1942, I was appointed chairman of the Council to succeed Dr. W. Duncan Owens who joined the armed services.

The first meeting of the Council was held at the Hollywood Beach Hotel, Wednesday, April 15, 1942, at 10:30 a.m. The day preceding, the House of Delegates had divided the state into four medical districts. Invitations for meeting places for the medical districts in the fall were received from six cities, based on the six medical district setup. It so happened that three invitations were received from cities in the new Northeast Medical District (B), namely Cocoa, Ocala and Jacksonville. On recommendation of Dr. Dyrenforth of the Third Councilor District, Ocala received the vote for the fall meeting. After careful consideration, the Council decided to hold the four district medical meetings as follows:

A—Panama City, October 8
B—Ocala, October 15
C—Sarasota, October 22
D—Miami, October 29

It was also decided to have two scientific papers at each meeting by members living in the district, and one guest essayist from the state at large. A limit of twenty minutes was set for each paper. The schedule of meeting dates has been carried in your Journal.

In July Chairman Owens took a vote of the Council on the question of postponing district medical meetings as scheduled. Because of gasoline rationing and priorities on trains and buses, the members of the Council voted to recommend to the Board of Governors that the fall meetings be postponed. On September 27 the Board of Governors met in Jacksonville and approved the action of the Council. The meetings were, therefore, not held and in the Journal under "Schedule of Meetings" the term "Postponed" has been run each month in lieu of the date of the meeting.

At the request of the doctors in Nassau County, Dr. L. Y. Dyrenforth, councilor for the Third District, and Stewart Thompson, Managing Director, met in Fernandina the evening of September 11, 1942. After a general discussion the local doctors organized the Nassau County Medical Society, elected their officers and applied for a charter. This new society was organized with seven charter members. The application for charter was approved by the Council and referred to the Board of Governors with the request that a charter be granted at the next meeting of the House of Delegates. Councilor Dyrenforth was commended for his assistance to the doctors of Nassau County in their efforts to organize a county society and become a part of the State Association.

Since there was no preconvention meeting held this year, all councilors were notified by mail to prepare their annual reports and mail them to the editor of the Journal for publication.

I am pleased to report that no controversial questions have been referred to the Council this year. Each councilor has been at his post ready and willing to assist when called upon. Owing to the war effort, our members have been so busy that many of the usual duties of a councilor have been omitted.

Respectfully submitted,
Lloyd J. Netto, *Chairman.*

"Reference Committee No. 3 recommends that the report of the Board of Governors be approved."

Motion made and seconded that the report of the Board of Governors be adopted and published in the Journal.

A lengthy discussion ensued, in which many delegates took part.

Dr. Limbaugh: "If it is in order, I would like to offer a motion."

The Chair ruled it out of order, as there was a motion before the House.

Dr. Jones: "I would like to offer as a substitute motion that the report of the Board of Governors be received and published with the exception of the matter relating to the constitutional amendment, from the Statewide Public Health Committee."

Seconded. A vote was taken and the substitute motion passed.

Dr. Peek: "I would like the secretary to read the paragraph approved by the Board of Governors, relating to the constitutional amendment of the statewide Public Health Committee."

Dr. Richardson read: . . . recommend that the personnel of the Board of Health shall be two doctors of medicine, one dentist, one pharmacist and one layman; that a member of the Board of Health shall be the secretary to the Board, in place of the Health Officer acting as secretary.

Dr. Peek: "I move you, sir, that we accept this clause as read by the secretary."

Motion seconded. Question called for and the motion was lost.

Dr. Rowlett: "I move that a committee of three be appointed by the president to work in conjunction with our Board of Governors, with authority to act in behalf of the Association in any compromise or in any way they deem advisable."

Motion seconded.

During an extended discussion Dr. Herbert L. Bryans, president of the State Board of Health, was extended the courtesy of the floor.

Dr. Watson: "I move an amendment to change the personnel of this committee to five members."

Seconded. Dr. Rowlett and his second accepted the amendment. Question was called for and the motion as amended was passed.

Committee appointed by Dr. Eugene G. Peek, president:

T. Z. Cason, M. D. Chairman, Jacksonville
H. Mason Smith, M. D. Tampa
Harrison A. Walker, M. D., Miami Beach
Herbert L. Bryans, M. D., Pensacola
Julius C. Davis, M. D., Quincy

Dr. Peek: "I move that this body support the special committee in a compromise agreement which they have worked out with the Statewide Public Health Committee, which calls for a board composed of two doctors of medicine, one person who shall be a dentist, a veterinarian or a pharmacist, and two lay persons."

Motion seconded and passed.

REPORT OF BOARD OF GOVERNORS

Three official meetings of the Board of Governors were held during the fiscal year.

The first meeting was held on April 15, 1942, at the Hollywood Beach Hotel, after the adjournment of the annual convention. A working budget for the fiscal year was presented by Dr. Richardson, the secretary, and after various items were discussed, it was adopted.

At the request of the Broward County Medical Society, honorary membership was granted to Dr. Francis S. Skiff.

For general purposes it was decided to use the term "Board of Governors" and to discontinue the use of the term "Executive Committee." Chapter VII, Section 1 of the Association's By-Laws provides that the Executive Committee may be called the Board of Governors.

The Board went on record as approving Dr. Gilbert S. Osincup to serve as Chief of the Medical Service for Florida in the joint activities of the U. S. P. H. S. and the O. C. D.

The second meeting was held in Jacksonville on September 27, 1942. A communication from Dr. O. O. Feaster, secretary of the Pinellas County Medical Society, was received, which stated that it would not be possible for that society to entertain the state convention in 1943, as planned. The Board took action to leave the problem of holding an annual meeting in 1943 in the hands of the president, president-elect, secretary, and chairman of the Board of Governors.

At the request of the Council the four district medical meetings, scheduled for October, 1942, were cancelled.

The report of our delegates to the A. M. A., Drs. Meredith Mallory and Edward Jelks, was read, approved and ordered published in the Journal.

An application for charter for a Nassau County Medical Society, signed by seven Nassau County physicians, having been presented by the Council, was approved for recommendation at the first meeting of the House of Delegates.

The War Participation Committee through its chairman, Dr. Edward Jelks, requested action by the Board of Governors on the resolution adopted by the State Defense Council of Florida, dated September 24, 1942, which was approved by the War Participation Committee, subject to certain provisos. Your Board of Governors approved the resolution with the proviso that all clearances be through the War Participation Committee, with the approval of the Board of Governors, and that a committee be included from the Florida State Dental Society.

President Osincup reported that many members now serving on the Association's standing committees are on active duty with the armed services. By common consent, it was agreed to permit the president to appoint an alternate when necessary, to serve any portion of a committeeman's unexpired term while he is in military service.

The third meeting was held in Jacksonville, February 28, 1943. A report was submitted by the officers who were instructed to study the question of an annual convention. On December 6, 1942, the officers held a meeting, those present being the president, president-elect, secretary and chairman of the Board of Governors. Other members attending in an advisory capacity were Drs. Edward Jelks, Walter C. Jones, Carol C. Webb, J. C. Dickinson and Herbert E. White. The report recommended that the Seventieth Annual Convention be held in Jacksonville from Thursday noon, April 15, to Friday noon, April 16, 1943, at the George Washington Hotel; that there be no entertainment; that families of physicians be urged not to attend; that specialty groups be notified that if they hold independent meetings, they are not to be scheduled in the Association's printed program; that a section of the convention number of the Journal be devoted to special advertisements of technical exhibitors, and that the program, including the exhibitors' section, be reprinted from the Journal and used as the official program at the convention, in place of the customary small printed program. It was also recommended that the president, secretary and chairman of the Committee on Scientific Work select three speakers to deliver addresses on subjects pertaining to the physicians in the war effort, and that the regular scientific programs as usually held, be omitted. The report of the special officers' committee was approved and made a part of the Board's minutes.

Your Board approved the advancing of the date of the Journal one month. An explanation of the reasons for this change may be found in the editorial section of the April Journal.

The Board of Past Presidents was authorized to solicit donations to offset the state dues of members with the armed services, income from such donations to be invested in war bonds.

It was decided to request the House of Delegates to leave the question of a meeting place for the 1944 convention with the Board of Governors, as there are no invitations to date.

Matter relating to an amendment to Article XV of the Constitution of the State of Florida, relating to public health, as proposed by the Statewide Public Health Committee, is deleted—See action House of Delegates.

Your Board went on record as approving steps taken to place doctors who are not licensed in Florida, which is now in effect and is in accordance with the Board's previous action.

Respectfully submitted,
Louie Limbaugh, *Chairman.*

"Reference Committee No. 3 approves the resolution presented by the Dade County Medical Association, relative to certain members entering the Public Health Service for the duration, to be carried without the payment of dues."

Motion made and seconded that the resolution be adopted. Motion prevailed.

RESOLUTION

WHEREAS, the House of Delegates of the Florida Medical Association, in annual meeting, resolved that members in good standing who entered military service be continued on the rolls as members in good standing without payment of dues, and

WHEREAS, some of our men have entered United States Public Health Service for the duration, and

WHEREAS, these men left good practices to devote their time and energy to the service of their country as truly as did those who joined actual military branches, and

WHEREAS, these men have not been carried on the roll of the Florida Medical Association without payment of dues, be it therefore

RESOLVED, that those men in the United States Public Health Service who were members in good standing of the Florida Medical Association before January 1, 1942, and who have entered Public Health Service, for the duration of this emergency be declared by this body in emergency service and granted full membership in the Florida Medical Association without payment of dues as are those members of other branches of military service.

Respectfully submitted by the
Dade County Medical Association, Inc.

Reference Committee No. 3 unanimously disapproved the proposed amendment to the Constitution and By-Laws presented by the Dade County Medical Association, which provided that to be eligible for office a member shall be actively engaged in the practice of medicine in the State of Florida; that if a member elected to office discontinues the private practice of medicine his office shall be declared vacant. The suggested amendment also provided that the members of all committees shall be selected from those actively engaged in the private practice of medicine.

Motion made and seconded that the proposed amendment to the Constitution and By-Laws be disapproved and that it be not published in the Journal.

A lengthy discussion followed.

Question was called for and the motion carried.

On motion duly seconded and carried, the House of Delegates adjourned, sine die.

Buy War Bonds

REGISTRATION

The total registration during the Seventieth Annual Meeting of the Florida Medical Association, held in Jacksonville, April 15 and 16, was 311; members, 203; visiting doctors, 30; exhibitors, 47; Woman's Auxiliary, 32.

REGISTRATION LIST

OFFICERS

Gilbert S. Osincup, President ..... *Orlando*
Eugene G. Peek, President-Elect ..... *Ocala*
L. W. Blake, 1st Vice President ..... *Bradenton*
Lloyd J. Netto, 2nd Vice President ..... *West Palm Beach*
Harrison A. Walker, 3rd Vice President ..... *Miami Beach*
Shaler Richardson, Secretary-Treasurer ..... *Jacksonville*
Stewart G. Thompson, Managing Director ..... *Jacksonville*

MEMBERS

Archer: Frank C. Jones. *Baldwin*: W. D. Brinson. *Bartow*: C. H. Murphy. *Branford*: P. C. Farnell. *Century*: J. S. Turberville. *Cocoa*: T. C. Kenaston. *Coral Gables*: Warren W. Quillian, Arthur H. Weiland. *Crystal River*: W. B. Moon. *Dade City*: W. Wardlaw Jones. *Daytona Beach*: J. R. Chandler, J. Ralph Vallotton. *DeLand*: T. F. Hahn. *Delray Beach*: M. E. Buerk. *Fernandina*: L. L. Bunker, George A. Dame. *Foley*: W. J. Baker. *Fort Lauderdale*: O. C. Brown, R. L. Elliston, D. W. Harris, Elliott M. Hendricks, L. U. Lumpkin, H. J. Peavy, Otto W. Schwalb. *Fort Myers*: William H. Grace. *Fort Pierce*: H. B. Goodwin, Jr. *Gainesville*: John E. Maines, Jr., Walter E. Murphree, Thomas A. Snow, George C. Tillman. *Havana*: J. W. Sapp. *High Springs*: W. E. Whitlock. *Inverness*: Claude L. Carter.

Jacksonville: Neil Alford, Lynne E. Baker, Donald M. Baldwin, John B. Black, O. P. Broadbent, W. H. Brooks, Alan Brown, Thomas E. Buckman, T. Z. Cason, B. A. Chapman, Thomas B. Christian, H. W. Counts, H. R. Drew, S. E. Driskell, Banks H. Goodale, Henry Hanson, O. E. Harrell, William G. Harris, J. W. Hayes, Graham E. Henson, Gerry R. Holden, Luther W. Holloway, Gordon H. Ira, Edward Jelks, William J. Knauer, L. S. Laffitte, Janet Leser, Louie Limbaugh, Thomas H. Lipscomb, J. G. Lyerly, R. L. McDaniel, Robert B. McIver, A. C. McKenzie, Charles B. Mabry, Webster Merritt, John H. Mitchell, Kenneth A. Morris, Frederick Oetjen, James N. Patterson, Harry A. Peyton, Ferdinand Richards, George Richardson, W. W. Rogers, William E. Ross, E. T. Sellers, W. McL. Shaw, Amelia B. Sheftall, Lauren M. Sompayrac, H. Marshall Taylor, L. V. Tyler, H. D. Van Schaick, E. W. Veal, F. J. Waas, Leo M. Wachtel, C. R. Wilcox, A. K. Wilson, J. Frank Wilson, B. F. Woolsey. *Key West*: James B. Parramore. *Lacoochee*: W. H. Walters. *Lake City*: R. B. Harkness, Harry S. Howell, J. F. Pitman. *Lakeland*: J. R. Boulware, G. C. Overstreet, W. L. Tillis, Herman Watson. *Marianna*: D. A. McKinnon. *Micanopy*: I. A. Dailey.

Miami: H. A. Barge, W. J. Barge, Milton M. Coplan, Carl E. Dunaway, Herbert Eichert, W. L. Fitzgerald, M. Jay Flipse, Elmo D. French, Francis W. Glenn, Ben F. Hodsdon, Laura M. Hobbs, Walter C. Jones, Paul Kells, George D. Lilly, J. A. McKenzie, P. J. Manson, P. D. Melvin, Colquitt Pearson, Homer L. Pearson, Gerard Raap, E. Clay Shaw, Wiley M. Sams, Donald W. Smith, J. W. Snyder, K. C. Thomas, F. A. Vogt, Scheffel H. Wright. *Miami Beach*: Walter T. Hotchkiss, F. J. Payton. *Ocala*: Robert D. Ferguson, E. G. Lindner, J. N. Moore, T. H. Wallis, Harry F. Watt. *Orlando*: Clarence Bernstein, T. C. Butt, C. J. Collins, H. A. Day, Frank D. Gray, Hewitt Johnston, Palmer Kundert, J. S. McEwan, Meredith Mallory, Grady Page, W. H. Spiers, Richard H. Walker, Walter A. Weed. *Panama City*: J. M. Nixon.

Pensacola: Herbert L. Bryans, J. M. Hoffman, M. A. Lischkoff, John J. McGuire, W. C. Payne. *Port St. Joe*: J. R. Norton. *Quincy*: J. C. Davis. *St. Augustine*: Charles C. Grace, R. D. Harris, D. T. Rankin, A. Clark Walkup, Herbert E. White. *St. Petersburg*: William M. Davis, Charles E. Hebard, Alvin L. Mills. *Sanford*: Leland H. Dame, G. H. Putnam. *Tallahassee*: Terry Bird, L. L. Dozier, Lucille J. Marsh, J. H. Pound, Sarah Parker White, B. A. Wilkinson. *Tampa*: A. M. Bidwell, John R. Boling, Leland F. Carlton, J. C. Dickinson, E. S. Gilmer, W. M. Rowlett, E. F. Shaver, H. Mason Smith, Joseph W. Taylor. *Vero Beach*: J. B. Kollar. *Wauchula*: A. A. Poucher. *West Palm Beach*: J. L. Carlisle, W. W. George, N. W. Loud, Kenneth Montgomery, W. Y. Sayad, J. R. Sory, W. E. Van Landingham. *Williston*: J. W. McMurray. *Winter Garden*: J. W. Clower, Ben H. Lawson. *Winter Haven*: W. W. Hardman, R. H. Mooty.

VISITING DOCTORS

Atlantic Beach: Ernest Serrano. *Camp Blanding*: Roy E. Kinsey, E. O. Majure. *Camp Gordon Johnston*: A. G. Silberstern. *Eglin Field*: D. D. Sax. *Fort Myers*: E. V. Herendeen. *Homestead*: L. R. Teasdale. *Jacksonville*: Dean C. Austin, B. M. Blumberg, J. V. Freeman, Lawrence E. Geeslin, Theodore C. Keller, Herschel Penn, R. F. Sondag, Wilson T. Sowder. *Miami*: W. W. Davies. *Pensacola*: Jarrell Penn. *St. Augustine*: H. P. Fox.

Alabama—Dothan: John T. Ellis. *District of Columbia—Washington*: George Baehr. *Georgia—Atlanta*: B. A. Dyar, Sanford W. French, Hugh E. Hailey, C. W. Roberts. *Brunswick*: T. V. Willis, M. E. Winchester. *Kingsland*: R. R. McCollum. *Thomasville*: Ernest F. Wahl. *Illinois—Chicago*: E. W. Williamson. *Iowa*—Des *Moines*: Walter L. Bierring.

EXHIBITORS

Abernathy, J. H., Southeastern Optical Co.	*Jacksonville*
Arnall, R. H., John Wyeth & Brother	*Columbus, Ga.*
Arrington, F. R., General Elec. X-Ray Corp	*Jacksonville*
Black, Loyd H., E. R. Squibb & Sons	*Jacksonville*
Brown, Harry, Tablerock Laboratories	*Jacksonville*
Budd, Joe G., American Optical Co.	*Atlanta, Ga.*
Bunton, Paul B., American Optical Co.	*Atlanta, Ga.*
Campbell, Allan, Surgical Supply Co.	*Jacksonville*
Carter, J. M., Petrogalar Laboratories	*Tampa*
Casey, Allen M., Wm. S. Merrell Co.	*Tampa*
Craig, C. B., C. V. Mosby Co.	*St. Louis, Mo.*
Davis, W. P., Southeastern Optical Co.	*Tampa*
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PLAN TO ATTEND

The Eleventh Annual Medical Short Course

AT THE

George Washington Hotel, Jacksonville

JUNE 21 THROUGH JUNE 26, 1943

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*Alternate to act for member who is in Armed Services and listed just above.



EUGENE G. PEEK, M. D., OUR PRESIDENT

In Dr. Peek the Association has a natural leader. His vital interest in civic and public affairs has made him mayor of Ocala for three terms. He has served as president of the Marion County Chamber of Commerce for three terms and is now a director of the State Chamber of Commerce. He has been a member of the State Democratic Committee for sixteen consecutive years, and is a past president of the Kiwanis Club.

Dr. Peek has also given unstintingly of his time to the furtherance of organized medicine. He has served as president of the Marion County Medical Society and of the former Central Florida Medical Association. He has been a vice president of the State Association and has worked on various committees at different times. He served as a member of the State Board of Medical Examiners for a number of years, for one year as its president. He is on the surgical staff of Munroe Memorial Hospital. He is a member of the American Medical Association, the Southern Medical Association and the Southeastern Surgical Congress.

Dr. Peek is a native Floridian. Born in Dixie County on February 27, 1882, the son of Thomas G. and Lucy Goodbred Peek, he received his preliminary education in the public schools of that county. After graduating from the former Florida State Normal School at DeFuniak Springs in 1904, he attended the University of South Carolina, from which he received his medical degree in 1910. He took postgraduate work both in New York City and in Chicago.

In 1910 Dr. Peek and Miss Elizabeth Hobbs were married in Moundsville, West Virginia. Soon thereafter they returned to Florida and located in Ocala where Dr. Peek has since practiced.

After serving a year as president-elect, Dr. Peek was inducted into the presidency of the Florida Medical Association at its Seventieth Annual Meeting held in Jacksonville, April 15 and 16, 1943.

The Journal of The Florida Medical Association

Owned and published by Florida Medical Association, Inc.

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THE ASSOCIATION'S ANNUAL MEETING

The Seventieth Annual Meeting of the Florida Medical Association was held in Jacksonville, April 15 and 16, 1943. The registration totaled 311, of which number 203 were members of the Association, 30 were visiting doctors, 47 were representatives of exhibiting firms and 32 were of the Woman's Auxiliary. The number attending the Association dinner was 176.

The membership attendance at the meeting this year was approximately 47 per cent of last year's when, at Hollywood, 434 registered. Considering that 30 per cent of our members are with the armed forces, physicians at home are very busy, and transportation facilities are curtailed, the attendance this year was exceptionally good. Elsewhere in this Journal the complete registration is shown.

Locating a hotel with adequate facilities for holding our convention was this year quite a problem. When the officers of the Pinellas County Medical Society reported that the hotel situation was too acute to consider meeting in St. Petersburg, as originally scheduled, a survey of the hotels in the state was made. As a result, the officers of the Association decided on the George Washington Hotel in Jacksonville. Facilities were adequate for the meeting but many members could not secure rooms at the headquarters hotel. Every courtesy was extended by Mr. Robert Kloeppel and his staff during the convention.

This being a war meeting, the sessions were limited to two half days, so that physicians would be away from their practices a minimum length of time. There were no scientific sessions, no entertainment, and no specialty group meetings scheduled in the official program. The meeting, although streamlined, was interesting and of definite value in the war effort.

GENERAL SESSIONS

Four general sessions were held during the convention, the first on Thursday at 1:30 p. m., when the president's annual address was delivered by Dr. Gilbert S. Osincup, and the joint annual report of Dr. Shaler Richardson, secretary-treasurer and editor of the Journal, and Dr. Stewart Thompson, managing director of the Association, was read by Dr. Richardson. Dr. E. F. Wahl of Thomasville and Dr. M. E. Winchester of Brunswick, representing the Medical Association of Georgia, were introduced. Dr. Walter L. Bierring, Commissioner of the Iowa State Department of Health, was also a guest. An address by invitation on "Medical Stewardship in War and Peace" was delivered by Dr. Charles W. Roberts, member of the Board of Trustees of the American Medical Association, Atlanta, Ga.

The second general session was held at 8:30 p. m., following the Association dinner, when Dr. George Baehr, Chief Medical Officer, Office of Civilian Defense, Washington, D. C., spoke on "British and American Experiences in Civil Defense."

The third general session was held at 10:30 a. m., Friday, at which time the guest speaker, Col. Sanford W. French, Chief of Medical Service, Fourth Corps Command, U. S. Army, Atlanta, Ga., discussed "The Doctor in the War Effort."

The fourth general session was held at 12 noon. The following officers were elected: president-elect, Dr. John R. Boling of Tampa; first vice president, Dr. Louie Limbaugh of Jacksonville; second vice president, Dr. Lloyd J. Netto of West Palm Beach; third vice president, Dr. Carl E. Dunaway of Miami; secretary, treasurer and editor of the Journal, Dr. Shaler Richardson of Jacksonville. The assignments for the regular Association committees, as announced by Dr. Eugene G. Peek, appear in this Journal on the page entitled Officers and Committees.

HOUSE OF DELEGATES

The first meeting of the House of Delegates convened on Thursday at 3:30 p. m. The question of selecting a meeting place for 1944 was left with the Board of Governors. Dr. Homer

SCHEDULE FOR MEDICAL POSTGRADUATE COURSE

HOUR	MONDAY June 21	TUESDAY June 22	WEDNESDAY June 23	THURSDAY June 24	FRIDAY June 25	SATURDAY June 26
8:00	REGISTRATION					
9:00 a. m.	PEDIATRICS *Subject to be announced* DR. RAVENEL	PEDIATRICS *Subject to be announced* DR. RAVENEL	PEDIATRICS *Subject to be announced* DR. RAVENEL	GYNECOLOGY "Carcinoma of the Uterus" DR. BEECHAM	GYNECOLOGY "Prophylaxis in Pelvic Carcinoma" DR. BEECHAM	GYNECOLOGY "Pelvic Inflammatory Disease" DR. BEECHAM
10:00 a. m.	VENEREAL DISEASES "Prenatal and Congenital Syphilis" DR. DEIBERT	VENEREAL DISEASES "Neurosyphilis" DR. DEIBERT	OBSTETRICS "Eclampsia" DR. RUCKER	OBSTETRICS "Mastitis" DR. RUCKER	OBSTETRICS "Diabetes and Pregnancy" DR. RUCKER	SURGERY "Acute Cholecystitis" DR. OCHSNER
11:00	RECESS	RECESS	RECESS	RECESS	RECESS	GYNECOLOGY "Relationship of the Hormones and Carcinoma" DR. BEECHAM
11:30 a. m.	MEDICINE "The Use and Abuse of Analgesics" DR. WILKINS	MEDICINE "Medical Aspects of Peripheral Vascular Diseases" DR. WILKINS	MEDICINE "Newer Concepts of the Regulation of Diabetes" DR. WILKINS	SURGERY "Abdominal Injuries" DR. OCHSNER	SURGERY "Scalenus Anticus Syndrome" DR. OCHSNER	SURGERY "Surgical Significance of Amebiasis" DR. OCHSNER
12:30	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	
2:00 p. m.	VENEREAL DISEASES "Early Infectious Syphilis" DR. DEIBERT	VENEREAL DISEASES "The Minor Venereal Diseases" DR. DEIBERT	OBSTETRICS "Analgesia" DR. RUCKER	OBSTETRICS "Minor Complications of Pregnancy" DR. RUCKER	OBSTETRICS "Third Stage of Labor" DR. RUCKER	
3:00	RECESS	RECESS	RECESS	RECESS	RECESS	
3:15 p. m.	MEDICINE "The Diagnosis of Fevers of Obscure Origin" DR. WILKINS	MEDICINE "Aviation and the Cardiovascular System" DR. WILKINS	MEDICINE "The Diagnosis of Icteric Diseases" DR. WILKINS	GYNECOLOGY "Ovarian Malignancy" DR. BEECHAM	GYNECOLOGY "Sterility" DR. BEECHAM	
4:15	RECESS	RECESS	RECESS	RECESS	RECESS	
4:30 p. m.	PEDIATRICS *Subject to be announced* DR. RAVENEL	PEDIATRICS *Subject to be announced* DR. RAVENEL	PEDIATRICS *Subject to be announced* DR. RAVENEL VENEREAL DISEASES "Venereal Diseases as a Post War Problem" DR. DEIBERT	SURGERY "Thoracic Injuries" DR. OCHSNER	SURGERY "Peripheral Arterial Disease" DR. OCHSNER	
7:00 p. m.		Dinner Medical Round Table			Dinner Surgical Round Table	
8:15 p. m.	VENEREAL DISEASES Clinic at Duval County Hospital DR. DEIBERT					

Buy War Bonds

L. Pearson of Miami was elected delegate to the American Medical Association and Dr. George C. Tillman of Gainesville was elected his alternate.

The second meeting of the House of Delegates was held Friday at 9:30 a. m. Full details concerning the actions taken by the House of Delegates are published in this Journal.

Sixty-three delegates were present at the first meeting and 57 at the second meeting. The names of those who answered roll call are listed in the proceedings of each meeting.

EXHIBITS

There were 22 technical exhibits, supervised by 47 representatives of exhibiting firms. Owing to transportation difficulties, exhibitors were not urged to attend the meeting this year, but in spite of unusual handicaps, many of them loyally participated. To give recognition to firms unable to send representatives, special two-color advertisements were run in the convention number of the Journal, as well as in the printed program. The exhibitors made a contribution of value, which is appreciated by our members.

POSTGRADUATE SHORT COURSE
JUNE 21-26, 1943

The Postgraduate Short Course is offered this year to the physicians of Florida by the Department of Medicine of the Graduate School of the University of Florida through the cooperation of the Florida Medical Association and the Florida State Board of Health.

Registration will begin at 8:00 Monday morning, June 21, at the George Washington Hotel, Jacksonville. A registration fee of $5.00 will be charged. No registration fee will be charged physicians on active duty in the Army and Navy.

FACULTY

MEDICINE

Dr. Robert W. Wilkins, Associate Professor of Medicine, Boston University.

SURGERY

Dr. Alton Ochsner, Professor of Surgery, Tulane University of Louisiana, New Orleans.

PEDIATRICS

Dr. Samuel F. Ravenel, Dean of the Southern Pediatrics Seminar, Saluda, North Carolina.

OBSTETRICS

Dr. M. Pierce Rucker, Richmond, Virginia.

GYNECOLOGY

Dr. Clayton T. Beecham, Assistant Professor of Obstetrics and Gynecology, Temple University, Philadelphia.

VENEREAL DISEASES

Dr. Austin V. Deibert, P. A. Surgeon, Medical Officer in Charge, Venereal Diseases Medical Center, United States Public Health Service, Hot Springs.

COMMITTEE

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Dr. Robert B. Harkness, Lake City.
Dr. Frank D. Gray, Orlando.
Dr. David R. Murphey, Tampa.
Dr. Herbert Bryans, Pensacola—(Advisory)

PLAN GRADUATE MEDICAL COURSES FOR PHYSICIANS IN ARMED FORCES

To extend to the physicians in the armed services the best facilities of American medicine in the interest of our fighting men, a series of Wartime Graduate Medical Meetings is in the process of organization under the auspices of the American Medical Association, the American College of Physicians and the American College of Surgeons, The Journal of the American Medical Association announces in its May 1 issue.

These meetings are authorized, as far as they concern the armed forces, by the Surgeon Generals of the Army, Navy and Public Health Service. The organizations concerned have appointed a committee of three men—one from each organization—to proceed with the work of administration.

It is proposed to hold the meetings in service hospitals. Qualified authorities have been appointed as national consultants in the various special fields of medicine.

MARRIAGES AND DEATHS

MARRIAGES

Dr. Oden A. Schaeffer and Miss Catherine Louise Smith of Miami were married on April 11.

DEATHS

Dr. Ray W. Blackmar of Jacksonville died on April 21.

Dr. Herbert A. Johnson of Palatka died on April 23.

STATE NEWS ITEMS

Dr. Meredith Mallory of Orlando was the invited speaker at the All-States Tourist Club in Kissimmee on Tuesday, April 6.

Dr. Henry Hanson, State Health Officer, presided at the second Florida State Board of Health conference held in Jacksonville, April 13. Speakers on the program, in addition to Dr. Hanson, were Capt. G. W. Larimore, venereal disease control officer for the Southeast Army Air Forces Training Centers, with headquarters at Maxwell Field, Ala.; Dr. A. J. DeSautels, venereal disease control officer for the Escambia County Health Unit; Lieut. Fred Turner, venereal disease control officer for the Seventh Naval District, of Miami. The conference was well attended and many items of importance to public health in Florida were discussed.

A special session of the Executive Board of the Florida Public Health Association was held at the State Board of Health Building in Jacksonville, April 15, 1943. Dr. Leland H. Dame of Sanford, Director of the Seminole County Health Unit, was elected president and Dr. W. W. Rogers, Jacksonville City Health Officer, was elected second vice president.

A meeting of the Florida Society of Dermatology and Syphilology was held April 15 in Jacksonville at a luncheon session in the Roosevelt Hotel. Dr. Hugh Hailey of Atlanta was the guest speaker. The next meeting will be held in Miami in October. Dr. Wiley M. Sams of Miami is president of the society and Dr. Lauren M. Sompayrac of Jacksonville, secretary.

Dr. Frank G. Slaughter of Jacksonville is the author of a new book entitled "Air Surgeon." It was published in the May issue of Cosmopolitan. This is his third book. Dr. Slaughter, formerly with the Riverside Hospital, is now a major in the Army.

RAY WELLBORN BLACKMAR

Dr. Ray W. Blackmar of Jacksonville died on April 21 after a five months' illness.

Dr. Blackmar had practiced medicine in Jacksonville for twenty-one years, specializing in urology. He was graduated from the University of Georgia in 1908 and received his medical degree from Tulane University in 1919. He completed three years of hospital training in St. Vincent's and Bellevue Hospitals in New York City, coming to Jacksonville in 1922.

Dr. Blackmar was a member of the Duval County Medical Society, the Florida Medical Association, the Southern Medical Association, the American Medical Association and the American Urological Association.

He was a member of the Kappa Alpha social fraternity and the Alpha Kappa Kappa medical fraternity. He was a Mason and was a member of the Morocco Temple and the Scottish Rite Bodies.

Dr. Blackmar came from a distinguished Georgia family. He was born at Columbus, the son of John Blackmar and Mrs. Susie Wellborn Blackmar.

Surviving him are his widow, Mrs. Elizabeth Ostrander Blackmar, and one son, Ray Wellborn Blackmar, Jr., of Jacksonville; a sister, Mrs. Jack Ellis, and brother, Alfred O. Blackmar, of Columbus, and another brother, Maj. Francis B. Blackmar, now serving with the Medical Corps, U. S. Army.

HERBERT ALEXANDER JOHNSON

Dr. Herbert A. Johnson, one of Palatka's leading physicians for the past thirty-seven years, died on April 23 at the U. S. Veterans' Hospital at Lake City, following a brief illness.

Born at Atlanta, Ga., April 26, 1879, Dr. Johnson was graduated from Hunter College, Atlanta, and the Georgia Medical School, now Emory University. He later took postgraduate courses at the New York Post-Graduate Medical School.

He started practicing at Green Cove Springs in 1904 and two years later moved to Palatka where he practiced his profession until taken ill three weeks prior to his death.

He was a partner of the late Dr. George E. Welch and a veteran of the Spanish-American War.

Survivors include the widow, Mrs. Kate Kirby Johnson, and a daughter, Miss Louise Reeder Johnson, both of Palatka; a son, Daniel Gordon Johnson, a member of the U. S. Merchant Marine, now in Pacific waters; his father, Dr. Daniel Noble Johnson, Decatur, Ga.; and three sisters, Mrs. Reese Hunnicut, Ocala, and Mrs. W. A. Ozmer and Miss Susie Johnson, both of Decatur.

COMPONENT COUNTY SOCIETIES

DADE

The April meeting of the Dade County Medical Society was held on the evening of the 6th at the Jackson Memorial Hospital. The following scientific program was presented, arranged through the courtesy of Major George Chittendon, Adjutant, Station Hospital, Miami Beach: "Varicocele," Lt. H. L. Egbert; "Treatment of Diabetes," Capt. I. A. Mirsky; "Postoperative Convalescence," Major Joseph Frehling.

DUVAL

The Duval County Medical Society held its regular meeting on the evening of May 4 at St. Luke's Hospital. Capt. David J. Flicker, guest speaker, presented a paper on "Psychiatric Rejection of Selectees."

ESCAMBIA

Dr. W. W. Bauer, director of the Bureau of Health Education of the American Medical Association and author of numerous books on hygiene and health, was guest speaker at a meeting of the Escambia County Medical Society held on the evening of March 30 at the San Carlos Hotel. His subject was "Doctors at War."

LAKE

The Lake County Medical Society has reported 100% of its dues for 1943. Officers of this society are president, Dr. L. R. Bowen, now in service; vice president and acting president, Dr. H. Spurgeon Cherry, Center Hill; secretary-treasurer, Dr. Rabun H. Williams, Eustis.

PASCO-HERNANDO-CITRUS

Dr. W. Wardlaw Jones of Dade City was host to the members of the Pasco-Hernando-Citrus County Medical Society at a dinner at the Edwinola Hotel, Thursday evening, April 8. After dinner the regular scientific meeting was held at the hotel. Several clinical cases of interest were reported and discussed. Present were Drs. George R. Creekmore and S. C. Harvard of Brooksville; W. Wardlaw Jones and Robert D. Sistrunk of Dade City, Claude L. Carter of Inverness, William H. Walters, Jr. of Lacoochee and J. T. Bradshaw of San Antonio. Dr. Carter invited the society to meet with him in May.

PINELLAS

Military medical officers and nurses were invited to attend the monthly dinner meeting of the Pinellas County Medical Society, held on the evening of April 2 at the Detroit Hotel, St. Petersburg. Dr. Gideon Timberlake discussed "Urinary Obstructions; Causes, Recognition, Relief, Results." Dr. L. B. Mount presented a paper on "An Unusual Dermatologic Condition," which was discussed by Dr. W. W. Wilson of Tampa.

On April 16 at 8 p.m., the members of the Pinellas County Medical Society met at the home of Dr. R. H. Knowlton for a round table discussion of "Care of the Aged." Dr. Knowlton acted as moderator.

The following resolutions have been adopted by the Society with respect to the deaths of two members:

JAMES M. ANDERSON

WHEREAS, it has pleased the Great Physician to call from our midst our friend and fellow-worker, Dr. James M. Anderson, and

WHEREAS, his interest and presence will be continually missed in the meetings of our Society, be it

RESOLVED, that we, the members of the Pinellas County Medical Society, offer our profound sympathy and deep condolence to his bereaved wife, sons, sisters, and brother; and be it

RESOLVED, that a copy of this resolution be sent to his wife, a copy be spread upon our minutes and a copy be sent to the Florida Medical Association.

EMIL LUSTIG

WHEREAS, it has pleased the Great Physician to call from our midst our friend and fellow-worker, Dr. Emil Lustig, and

WHEREAS, his interest and presence will be continually missed in the meetings of our Society, be it

RESOLVED, that we, the members of the Pinellas County Medical Society, offer our profound sympathy and deep condolence to his bereaved wife, his son, and daughters, and be it

RESOLVED, that a copy of this resolution be sent to his wife, a copy be spread upon our minutes and a copy be sent to the Florida Medical Association.

POLK

The Polk County Medical Society is on the honor roll of 100% paid societies. Officers of this organization are Dr. Thomas G. Simmons of Auburndale, president; Dr. J. G. Gilchrist of Bartow, vice president, and Dr. Edgar Watson of Lakeland, secretary-treasurer.

SARASOTA

The Sarasota County Medical Society has reported 100% of its dues for 1943. Heading this society are Dr. O. H. Cribbins, president, and Dr. A. O. Morton, secretary-treasurer.

SEMINOLE

The Seminole County Medical Society has paid 100% of its dues for 1943. Dr. George H. Putnam is president of the society; Dr. Theo. W. Langley, vice president, and Dr. Leland H. Dame, secretary-treasurer.

BOOKS RECEIVED

Acknowledgment of books received will be made in this column and this will be deemed by us a full compensation to those sending them. A selection will be made for review as expedient.

FOOD CHARTS: FOODS AS SOURCES OF THE DIETARY ESSENTIALS. Prepared by a joint committee of the Council on Foods and Nutrition of the American Medical Association and of the Food and Nutrition Board of the National Research Council. Current interest in nutrition is at a high level and the subject merits all the attention which it is receiving. Information about the composition of foods now is on a quantitative basis. There are eight charts showing the contribution that individual foods may make with respect to the needs for protein, calcium, iron, vitamin A, thiamine, riboflavin, nicotinic acid, and ascorbic acid. A feature of these graphic presentatons is that the values are presented in terms of the proportion of the daily requirements which are supplied by typical servings of each. Paper. Price 10 cents; quantity prices on request: Pp. 20. Chicago: American Medical Association, 1942.

BACTERIOLOGY LABORATORY METHODS. By E. S. King, M. D., Professor of Bacteriology, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, N. C. *Bacteriology Laboratory Methods* is presented as a guide to laboratory work in medical bacteriology. It sets forth in orderly sequence those technics and procedures essential in the training of students for the practice of medicine, or for those students who do not expect to study medicine, it provides a solid foundation for the further pursuance of the subject. An attempt has been made to make this manual so flexible that instructors may select portions or sections which to them seem most important for special purposes, and which may be best adjusted to the time available for the course. Fabrikoid. Price $2.50. Pp. 178. Charlotte, N. C.: Charlotte Medical Press, 1941.

WHEN DOCTORS ARE RATIONED. By Dwight Anderson, Director Public Relations, Medical Society of the State of New York, and Margaret Baylous, Therapist, Charleston General Hospital, Charleston, W. Va. Doctors are heing rationed. They will continue to be rationed so long as the war lasts. A Procurement and Assignment Service has been set up in Washington for the purpose of rationing doctors to the Armed Forces without disparagement to civilian needs. The duties of this service are fully described with all details on mobilization of the medical profession and its distribution: how doctors are placed in the Army, Navy, and Public Health Service, Civilian Defense, Industry, and to meet local medical needs. We all have to meet one of the most important problems presented by the fact of war. "When Doctors are Rationed" helps us materially in solving the problems. There is an introduction by Nathan B. Van Etten, M. D., past president of the American Medical Association. Cloth. Price, $2.00. Pp. 255. New York: Coward-McCann, Inc., 1942.

ESSENTIALS OF GYNECOLOGY. By Willard R. Cooke, M.D., F.A.C.S., Professor and Head of the Department of Obstetrics and Gynecology, University of Texas, Galveston, Tex. This book has grown directly out of the author's teaching and clinical experience—a background which, through good fortune, has had the advantage of the illumination and insight resulting from seeing the results of gynecologic teaching as these emerge before examining boards.

A book on gynecology that will really fit your needs, full of information that you can use in your practice. In all aspects of diagnosis and treatment emphasis is placed on elements of direct and practical importance to the practitioner. In anatomy, embryology, abnormalities, history taking and examination, it is complete and thorough. Operative treatment is covered not to make finished gynecologic surgeons, but to give the reader a thorough comprehension of what can be done by the general practitioner, and what must be referred to the specialist. None of the fundamentals were sacrificed because this book was pruned to the essentials.

A book that will really fit the needs of the teachers and students of this subject. Unique in its presentation of the gynecologic patient as a personality, this text also goes further than most books in discussing the important aspects of the patient's mode of life and psychology. Such subjects as the organs and structures of the entire generative system—the anatomy, physiology, pathology and endocrinology of the female reproductive system come to vivid life in this distinctive work. Cloth. Price, $6.50. Pp. 475, with 197 illustrations. Philadelphia: J. P. Lippincott Company, 1943.

DISEASES OF THE BREAST. By Charles F. Geschicter, M.A., M.D., Director of the Francis P. Garvan Cancer Research Laboratory, Baltimore. With a special section on treatment in collaboration with Murray M. Copeland, A.B,. M.D., F.A.C.S., Instructor in Surgery, Johns Hopkins Medical School. In recent years contributions to the etiology, the diagnosis and the treatment of mammary diseases have accumulated rapidly. Much of the progress made can be attributed to the different groups of specialists interested in these problems. The specialties concerned include surgery, radiology, obstetrics and gynecology, pathology, endocrinology, and laboratory technology. In bringing together in this volume the work done in these diverse fields, the usefulness of this information to the general practitioner as well as to the specialties enumerated has been foremost in mind. Fabrikoid. Price $10.00. Pp. 829, with 593 illustrations. Philadelphia: J. B. Lippincott Company, 1943.

THE ANSWER IS . . . YOUR NERVES. Arnold S. Jackson, M. D., F. A. C. S., Editor of the Jackson Clinic Bulletin, Madison, Wis. This book has been carefully prepared over a period of several years by the author after an experience dealing with many patients at the Mayo and Jackson clinics. Cloth. Price, $2.00. Pp., 200, with illustrations. Madison, Wis.: Kilgore Printing Company, 1942.

ADVERTISERS' NOTES

VITAMIN B_c

Isolation and crystallization of the antianemic Bc vitamin—half a million times more potent than fresh liver, which may speed convalescence from many illnesses because of its blood regenerating effects, was recently announced by scientists of Parke, Davis & Company, world's largest pharmaceutical house.

The announcement, contained in the April 30 issue of Science, describes the new vitamin Bc as definitely a member of the Vitamin B Complex.

The subletter "c" has been added to the name to represent the thousands of chicks on which experimental studies have been made.

The existence of the antianemic Bc vitamin was first announced by Professor A. D. Hogan and his associates at the University of Missouri. They observed that chicks placed on a supposedly sufficient diet failed to grow and developed severe anemia, and that this could be cured by adding crude liver extract. Dr. Hogan and an associate, Dr. B. L. O'Dell, were able to make a 300-fold concentration of this antianemic factor from liver. Their work became the basis for extensive research which finally led to the isolation of this antianemic vitamin in pure form.

Parke-Davis research laboratories, headed by Dr. Oliver Kamm, scientific director, undertook the isolation of Vitamin Bc in the autumn of 1940. Their new, crystalline product represents a 500,000-fold concentration of the antianemic activity present in liver. Although the chemical formula of this newly-isolated vitamin is not known, obviously the next step on the Parke-Davis research program is its chemical identification. Studies are still being carried on, aimed at a larger production of Vitamin Bc so that eventually its value in treatment of various forms of secondary anemia can be determined.

SQUIBB'S ARMY-NAVY "E" AWARD RENEWED FOR ANOTHER SIX MONTHS

A star has been added to the Army-Navy "E" pennants which fly over the New York office and the Brooklyn and New Brunswick, N. J., laboratories of E. R. Squibb & Sons. This is the outward symbol of the renewal for another six months of the "E" award first granted to Squibb in September, 1942.

In his letter to Carlton H. Palmer, chairman of the Squibb board, announcing the renewal, Admiral C. C. Bloch, chairman of the Navy Board for Production Awards, wrote:

"The men and women of E. R. Squibb & Sons have achieved a signal honor by continuing their splendid production in such volume as to justify this renewal of their award. In the first instance, it was difficult to win the Army-Navy "E" and by meriting a renewal, the management and employees have indicated their solid determination and ability to support our fighting forces by supplying the equipment which is necessary for ultimate victory."

Approximately one-half of the entire Squibb output now goes to the armed forces or lend-lease, and includes hundreds of products—from dental cream to typhus vaccine. Many departments are working around the clock to insure adequate supplies for both military and civilian needs, for Squibb men and women are determined to keep their "E" pennants flying, and to add a star at regular six-month intervals.

CLINICAL EVALUATION OF 'SECONAL SODIUM'

During the course of a year, Dietrich (Anesth. & Analg., **22**:28, 1943) attempted to evaluate 'Seconal Sodium' (Sodium Propyl-methyl-carbinyl Allyl Barbiturate, Lilly) as a sedative in general pediatric practice. Over 3,700 doses of the drug were administered to more than 500 children and infants, both private and ward patients, without any untoward effects on pulse, temperature, blood pressure, or cerebrospinal fluid pressure. The drug proved to be an excellent general sedative possessed of some analgesic action, and in tetanus and in the performance of certain otherwise painful procedures where a general anesthetic was not desirable, such as pinch grafts, lumbar punctures, myringotomies, and incision and drainage of minor abscesses, it was of particular value.

When the age of the patient and freedom from gastric symptoms permit, 'Seconal Sodium' should be given by mouth. When administered by rectum, however, its action is only slightly retarded. The intact capsule may be inserted in the manner of a suppository by first pricking each end of the capsule with a pin; or, where fractional doses are desired, the powder may be suspended in tap water and given by rectum with a small syringe.

Dietrich found that for good sedation in children of average nutrition the following doses were appropriate: 1-3 months, ¼-½ gr. by rectum; 3-6 months, ½-¾ gr. by rectum; 6-36 months, ¾-1 gr. by rectum; 3-8 years, ¾ gr. by mouth or ¾-1½ grs. by rectum; 8-15 years, ¾-1½ grs. by mouth or 1-1½ grs. by rectum. For very deep sedation or for light analgesia some increase in dose may be necessary. Any dose in this schedule may be repeated safely once within an hour if the desired result is not obtained, or may be given with impunity every 3-4 hours if circumstances demand prolonged sedation.

DURING FOOD SHORTAGES

It is well to bear in mind that dried brewers yeast, weight for weight, is the richest food source of the Vitamin B Complex. For example, as little as 1 level teaspoonful (2.5 Gm.) Mead's Brewers Yeast Powder supplies: 45% of the average adult daily thiamine allowance, 8% of the average adult daily riboflavin allowance, 10% of the average adult daily niacin allowance.

This is in addition to the other factors that occur naturally in yeast such as pyrodoxin, pantothenic acid, etc.

Send for tested wartime recipes, the flavors of which are not affected by the inclusion of Mead's Brewers Yeast Powder. Mead Johnson & Company, Evansville, Ind., U. S. A.

DIAMONDS WORK FOR WAR

Diamonds have gone to war to make glass eyes for the Army and Navy. In 1942 thousands of carats of industrial diamonds—many times the weight of the famous Hope diamond—were employed to speed up the grinding, cutting and edging of millions of precision lenses for military purposes, according to a release from the American Optical Company.

S. T. Sheard, manager of the concern's lens-grinding plant, announced that diamonds, hardest of all minerals, grind lenses faster and more accurately than previously used abrasives, and said that although industrial diamonds are not as costly as those gems worn for decoration, they are infinitely more valuable because they aid in providing better vision for our armed forces.

He also revealed that diamond-charged grinding tools are an essential part of new lens-grinding machines developed by the optical concern, a number of which were recently delivered to the War Department for distribution to plants making lenses for the war effort.

Among equipment carried by mobile spectacle shops now serving overseas, he added, are special machines which utilize diamonds to cut spectacle lenses worn by soldiers with defective eyesight.

WOMAN'S AUXILIARY

TO THE

FLORIDA MEDICAL ASSOCIATION, INC.

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THE ANNUAL CONVENTION

Mrs. F. W. Krueger, 1055 Arbor Lane, Jacksonville, was reelected president of the Woman's Auxiliary to the Florida Medical Association, at the annual state convention held in Jacksonville, on April 15 and 16. Others elected to serve during the coming year were: Mrs. C. H. Murphy, Bartow, first vice president; Mrs. P. J. Manson, Miami, second vice president; Mrs. W. C. Williams, West Palm Beach, recording secretary and treasurer; Mrs. J. L. Anderson, Coral Gables, historian, and Mrs. Leigh F. Robinson, Ft. Lauderdale, parliamentarian.

Committee chairmen appointed were: Mrs. Paul Kells, Jacksonville Naval Base, Defense; Mrs. S. M. Copeland, Jacksonville, Press and Publicity; Mrs. P. J. Manson, Miami, Hygeia; Mrs. Rupert Stovall, Ft. Lauderdale, Public Relations; Mrs. E. M. Hendricks, Ft. Lauderdale, Legislation; Mrs. Gordon Ira, Jacksonville, Finance; Mrs. H. A. Leavitt, Miami, Exhibits; Mrs. W. J. Barge, Miami, Archives; Mrs. George C. Tillman, Gainesville, Scholarships; Mrs. C. H. Murphy, Bartow, Programs; Mrs. P. J. Manson, Miami, Organization; Mrs. C. E. Royce, Jacksonville, Bulletin.

Mrs. T. C. Kenaston, of Cocoa, was named general chairman of districts. Appointed to serve as district chairmen were: Mrs. Laurie J. Arnold, Jr., Lake City, District A; Mrs. J. H. Owens, Jacksonville, District B; Mrs. James C. Griffin, Tampa, District C; Mrs. Leigh F. Robinson, Ft. Lauderdale, District D.

A preconvention board meeting was held in the home of Mrs. Krueger, at 1:30 p.m. Thursday, April 15. The general business session followed with the president, Mrs. F. W. Krueger, in the chair. Rev. C. F. H. Krueger, pastor, Tenth Street Lutheran Church, gave the invocation. Mrs. J. W. Hayes, president of the Woman's Auxiliary to the Duval County Medical Society, gave the welcoming address and Mrs. W. C. Williams, West Palm Beach, the response.

A very impressive memorial service was conducted by Mrs. Eugene G. Peek of Ocala, honoring the memory of members who had passed on since the last convention.

The president's report was outstanding. She received a vote of thanks from the Auxiliary for her splendid accomplishments during the year. Reports from the various auxiliaries throughout the state showed a remarkable program of defense activities being sponsored by the doctors' wives in every county.

Dr. E. G. Peek, Ocala, incoming president of the Florida Medical Association, was introduced by Mrs. Krueger as the guest speaker. Dr. Peek spoke very highly of the work of the Woman's Auxiliary in the past and encouraged the members to continue their interest in war work. He pledged his cooperation and support to the Auxiliary during the coming year.

Mrs. Gordon H. Ira, in a few well chosen words, reinstated the Auxiliary officers for the coming year. She introduced the past presidents of the State Medical Auxiliary and presented each with a lovely corsage as a token of appreciation for their past services and continued interest in the Auxiliary activities. Past presidents attending the meeting were Mrs. Eugene G. Peek, Mrs. Ethel Jones Driskell, Mrs. E. W. Veal, Mrs. S. M. Copeland, and Mrs. Gordon H. Ira.

At the close of the business session members were invited to a tea at the home of Mrs. J. W. Hayes, 1036 Elder Lane, South Jacksonville. Lovely refreshments were served from a table overlaid with an exquisite imported lace cover, centered with a tall arrangement of spring flowers; tall white lighted candles in silver candelabra burned on either end. Mrs. F. W. Krueger poured tea and Mrs. Gordon H. Ira presided over the punch bowl.

Following the tea the ladies enjoyed strolling through the lovely garden of Mrs. Hayes. Assisting the hostess in caring for her guests were Mrs. Victor H. Hughes, Mrs. Charles Henley, and Mrs. E. W. Veal.

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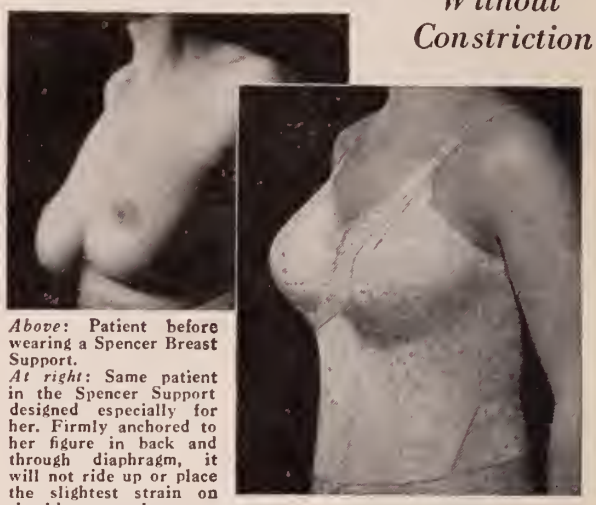
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Florida Medical Association	Eugene G. Peek, Ocala	Shaler Richardson, Jacksonville	To Be Announced
Florida Medical Districts:			
A—Northwest	Courtland D. Whitaker, Marianna	Stewart Thompson, Jacksonville	Tallahassee, Postponed
B—Northeast	L. Y. Dyrenforth, Jacksonville	" " "	Ocala, Postponed
C—Southwest	Edgar Watson, Lakeland	" " "	Sarasota, Postponed
D—Southeast	William Y. Sayad, W. Palm Beach	" " "	Miami, Postponed
Alabama Medical Association	H. B. Searcy, Tuscaloosa	D. L. Cannon, Montgomery	
Georgia, Medical Assn. of	James A. Redfearn, Albany	E. D. Shanks, Atlanta	Atlanta, May 11-14, 1943
Florida—			
Section, Am. College Phys.	R. H. Knowlton, St. Petersburg	Kenneth Phillips, Miami	To Be Announced
Dental Society, State	A. Malcolm Smith, D.D.S., Tampa	H. L. Cartee, D.D.S., Miami	To Be Announced
Derm. and Syph., Soc. of	Wiley M. Sams, Miami	Lauren M. Sompayrac, Jacksonville	Miami, October, 1943
East Coast Medical Association	T. C. Kenaston, Cocoa	I. M. Hay, Melbourne	Postponed
Hospital Association	Mr. W. E. Arnold, Jacksonville	Miss Katharine Moyer, Lake Wales	
Industrial Surgeons, Assn. of	Frank D. Gray, Orlando	Richard H. Walker, Orlando	To Be Announced
Medical Postgraduate Course	Turner Z. Cason, Jacksonville	Chairman	
Nurses Association, State	Mrs. Ann Thompkins, Leesburg	Miss Madalee Hazel, St. Petersburg	
Ophthal. & Otol., Soc. of	Shaler Richardson, Jacksonville	C. E. Dunaway, Miami	To Be Announced
Pathological Society	L. Y. Dyrenforth, Jacksonville	Iva C. Youmans, Miami	To Be Announced
Pediatric Society	Ludo von Meysenbug, Daytona B.	Robert Blessing, Ft. Lauderdale	To Be Announced
Pharmaceutical Association, State	Mr. H. B. Douglas, Bonifay	Mr. R. Q. Richards, Ft. Myers	Miami, To Be Announced
Public Health Association	Leland H. Dame, Sanford	E. M. L'Engle, Jacksonville	
Radiological Society	John N. Moore, Ocala	Walter A. Weed, Orlando	To Be Announced
Railway Surgeons' Association	Frank D. Gray, Orlando	W. C. Page, Cocoa	To Be Announced
Tuberculosis & Health Assn.	Mrs. M. M. Ebert, Lake Wales	Mrs. May Pynchon, Jacksonville	Jacksonville, May, 1943
Chattahoochee Valley Med. Assn.	Herbert E. White, St. Augustine	Robert B. McIver, Jacksonville	Postponed
Gulf Coast Clinical Society	G. G. Oswalt, Mobile, Ala.	C. L. Rutherford, Mobile, Ala.	Postponed
S.E. Sec., Am. Cong. Phys. Ther.	John J. McGuire, Pensacola	Kenneth Phillips, Miami	
Southeastern Surgical Congress	Alton Ochsner, New Orleans	B. T. Beasley, Atlanta	Postponed
Southern Medical Association	Harvey F. Garrison, Jackson, Miss.	Mr. C. P. Loranz, Birmingham	To Be Announced
Suwannee River Medical Society	L. J. Arnold, Jr., Lake City	H. S. Howell, Lake City	

COMPONENT SOCIETIES BY DISTRICTS

	SOCIETY	PRESIDENT	SECRETARY	MEETING DATE	MEMBERS Total	MEMBERS Paid	COUNCILOR
A	Bay	J. Powell Adams, M.D. Panama City	J. O. Barfield, M.D. County Health Unit Panama City		14	12	
	Escambia *Santa Rosa	Alvyn W. White, M.D 24 W. Chase St. Pensacola	Lee Sharp, M.D. 24 W. Chase St. Pensacola	2nd Tuesday 8:00 P.M.	50	49	A-1-45 C. D. Whitaker, M.D. Marianna
	Franklin-Gulf		J. R. Norton, M.D. Port St. Joe	3rd Tuesday Odd Months	5	100%	
	Jackson *Calhoun	R. N. Joyner, M.D. Marianna	C. A. Adams, Jr., M.D. Marianna	2nd Tuesday 7:30 P.M.	13	100%	
	Walton-Okaloosa	A. G. Williams, M.D. Lakewood	R. B. Spires, M.D. DeFuniak Springs	3rd Thursday 8:00 P.M.	6	100%	
	Washington-Holmes	N. J. Dawkins, M.D. Vernon	B. W. Dalton, M.D. Vernon		6	100%	
B	Columbia *Baker, Hamilton	Harry S. Howell, M.D. Blanche Hotel Annex Lake City	Thomas H. Bates, M.D. Blanche Hotel Annex Lake City	1st Monday 7:30 P.M.	12	100%	A-2-44 William D. Rogers, M.D. Chattahoochee
	Leon-Gadsden-Liberty-Wakulla-Jefferson	James W. Sapp, M.D. Havana	B. A. Wilkinson, M.D. Telephone Bldg. Tallahassee	Quarterly 8:00 P.M.	40	37	
	Madison-Suwannee	Eustace Long, M.D. Madison	E. D. Thorpe, M.D. Madison		7	100%	
	Taylor *Dixie, Lafayette	W. J. Baker, M.D. Foley	G. H. Warren, M.D. Perry	Last Friday 8:00 P.M.	5	4	
	Alachua *Bradford, Gilchrist, Union	Geo. C. Tillman, M.D. 505 W. University Gainesville	Chester F. Ahmann, M.D. 1043 W. Masonic Gainesville	2nd Wednesday 7:30 P.M.	28	25	
	Duval *Clay	T. Z. Cason, M.D. 2033 Riverside Ave. Jacksonville	F. A. Copp, M.D. 411 St. James Bldg. Jacksonville	1st Tuesday 8:15 P.M.	195	193	B-3-45 L. Y. Dyrenforth, M.D. Jacksonville
	Marion *Levy	T. Hartley Davis, M.D. 202 Commercial Bk. Bldg. Ocala	B. F. Drake, M.D. Professional Bldg. Ocala	3rd Thursday 12:30 P.M.	29	27	
	Nassau	Geo. A. Dame, M.D. Fernandina	E. F. Waite, M.D. Fernandina	2nd Wednesday 8:00 P.M.	9	100%	
	Putnam	J. Worth Brantley, M.D. Grandin	C. M. Knight, M.D. Palatka	2nd Tuesday Even Months 7:00 P.M.	9	100%	
	St. Johns	Alfred W. Norris, M.D. Flagler Hospital St. Augustine	Charles C. Grace, M.D. East Coast Hospital St. Augustine	3rd Tuesday 8:30 P.M.	12	100%	
	Brevard	G. E. Christie, M.D. Box 151 Titusville	I. K. Hicks, M.D. Melbourne	3rd Wednesday	11	100%	
	Lake *Sumter	Louis R. Bowen, M.D. Eustis	R. H. Williams, M.D. Eustis	1st Thursday 12:30 P.M.	18	100%	B-4-44 D. T. McEwan, M.D. Orlando
	Orange *Osceola	T. E. McBride, M.D. Apopka	John A. Pines, M.D. 106 E. Central Ave. Orlando	3rd Wednesday 8:00 P.M.	93	83	
	Seminole	Geo. H. Putnam, M.D. Touchton Bldg. Sanford	Leland H. Dame, M.D Co. Health Unit Sanford	2nd Tuesday 5:30 P.M.	11	10	
	Volusia *Flagler	L. von Meysenbug, M.D. Box 3356 Daytona Beach	R. L. Miller, M.D 258½ S. Beach St. Daytona Beach	2nd Tuesday 7:30 P.M.	44	37	
C	Hillsborough	T. C. Maguire, M.D. 104 S. Collins St. Plant City	James S. Grable, M.D. 811 Citizens Bldg. Tampa	1st Tuesday 8:00 P.M.	104	92	
	Manatee	M. M. Harrison, M.D. Professional Bldg. Bradenton	L. W. Blake, M.D. Bradenton	3rd Tuesday 7:00 P.M.	14	100%	C-5-44 Leland F. Carlton, M.D Tampa
	Pasco-Hernando-Citrus	W. W. Jones M.D. Dade City	G. R. Creekmore, M.D. Brooksville	2nd Thursday 7:00 P.M.	11	100%	
	Pinellas	W. C. McConnell, M.D. 313 First Federal Bldg. St. Petersburg	Annette M. Feaster, M.D 166 Fourth Ave. N. E. St. Petersburg	1st and 3rd Fridays 6:30 P.M.	103	99	
	Sarasota	O. H. Cribbins, M.D. 138 N. Link Sarasota	A. O. Morton, M.D. Commercial Court Sarasota	2nd Tuesday 8:30 P.M.	20	100%	
	DeSoto-Hardee-Highlands-Charlotte-Glades	M. C. Kayton, M.D. Wauchula	C. H. Kirkpatrick, M.D. Box 454 Arcadia	Quarterly	20	100%	C-6-45 Edgar Watson, M.D. Lakeland
	Lee *Collier, Hendry	H. Quillian Jones, M.D. 18 Leon Bldg. Fort Myers	W. H. Grace, M.D. Box 907 Fort Myers	3rd Tuesday 7:30 P.M.	17	16	
	Polk	T. G. Simmons, M.D. Corlett Bldg. Auburndale	Edgar Watson, M.D. Box 1021 Lakeland	2nd Wednesday 1:00 P.M.	62	100%	
D	Palm Beach	K. Montgomery, M.D. Guaranty Bldg. W. Palm Beach	J. L. Carlisle, M.D. 301 Guaranty Bldg. W. Palm Beach	4th Monday 8:00 P.M.	68	62	D-7-45 William Y. Sayad, M.D. West Palm Beach
	St. Lucie-Okeechobee-Indian River-Martin	Francis A. Gowdy, M.D. Box 745 Ft. Pierce	Adrian M. Sample, M.D. Box 176 Ft. Pierce	3rd Thursday 8:00 P.M.	17	16	
	Broward	D. W. Harris, M.D. 420 Sweet Bldg. Ft. Lauderdale	O. C. Brown, M.D. 915 Sweet Bldg. Fort Lauderdale	2nd Wednesday 8:00 P.M.	41	100%	D-8-44 Elbert McLaury, M.D. Hollywood
	Dade	H. L. Pearson, M.D. 416 Ingraham Bldg. Miami	Wiley M Sams, M.D. 305 Ingraham Bldg. Miami	1st Tuesday 8:30 P.M.	340	294	
	Monroe	Harry C. Galey, M.D. 532 Fleming St. Key West	W. R. Warren, M.D. 511 Eaton St. Key West	1st Sunday 9:00 P.M.	5	100%	

*Supervise and aid until organized separately.



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The doctor I work for is one of the busiest pediatricians in town.

When I started working for him, I noticed that he was prescribing plain cow's milk modified—almost as routine. Once in a while when he had a problem case—he would look to S-M-A as his trouble-shooter.

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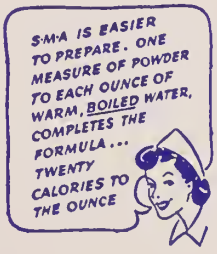
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